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SIGN AND BANNER MAKING
PRACTICAL DESIGN AND ORNAMENT

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SIGN AND BANNER MAKING

INTRODUCTION

1. Practical Requirements.—The demands made on an up-to-date sign painter require that he be ready to undertake every form of sign making known. That the general tendency in sign making is upwards and fast approaching artistic and classical ideas is evidenced on every hand, especially in our largest cities. Some of the subjects treated in the following pages may be considered to be outside the province of a sign painter, judging from the work that has been required of him in the past. But, with the acquisition of every facility for executing work quickly and economically, the sign maker has found it greatly to his advantage to be prepared to make and furnish every separate part of the work, including any of the novelties adopted from time to time in the construction of the sign.

The instructions given here anticipate, as far as possible, every need from the first steps in sign making and painting to the hanging of the sign, and including, also, a basis of charges for the work. Therefore, after completing this Section and the Drawing Plates, the student should be able to undertake successfully any class of sign work he may be called on to furnish. He should experience no difficulty in equipping and successfully operating a sign shop, and to this end all necessary furnishings, stock, tools, appliances, etc. have been carefully described.

The student is urgently reminded of the need for thorough study and practical experience in connection with every detail of the work; he should apply every method herein described, and become familiar with every operation. In

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order to do this, it is of course necessary that the student should devote sufficient time to the work to complete it, and it often entails, besides, a small outlay for materials; but the results are always so satisfactory that the thorough student will consider these as unimportant in comparison with the knowledge gained.

DESIGNING

SIGN BOARDS

2. Plain Signs.—The simplest kind of sign board is the ordinary planed pine board. The first step toward embellishment occurs in the treatment of the edge. This may be chamfered, as shown in Fig. 1. A cross-section view of the board is given in the figures, which will better illustrate the

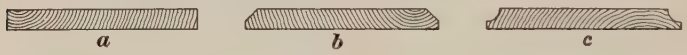


Fig. 1

subject. In Fig. 1, *a* shows the plain board; *b*, the beveled board; and *c*, the chamfered edge.

The best material to use for sign boards is kiln-dried white pine, in order that the sign may not check or warp when finished. White wood also is used extensively, and if coated

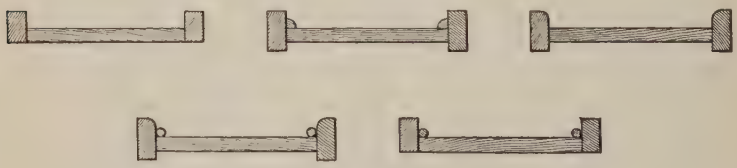


Fig. 2

evenly on both sides it will not warp or crack. Oak and cherry are used for the best quality of work, but these likewise should be kiln-dried.

The banded sign is the next step in the elaboration of the sign board. This banding usually projects from $\frac{1}{2}$ inch to

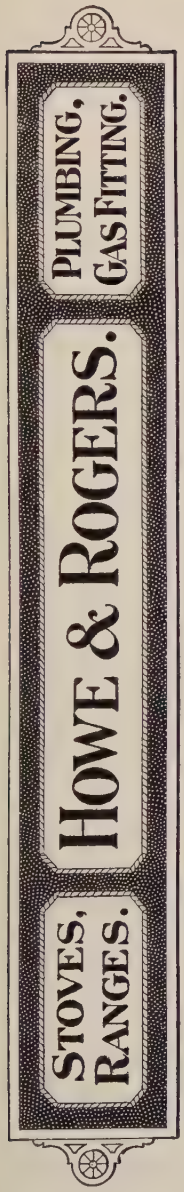


FIG. 3

1 inch above the surface of the board. Inside of the band, against the face of the sign, a round or quarter-round molding is often placed. In Fig. 2 are shown the several forms employed.

The surface of the sign should be considered, as this also is subject to treatment at the hands of the sign carpenter. A half-round molding, from $\frac{3}{8}$ inch to 1 inch, according to the size of the sign, may be placed on the face of the board at the required distance from the edge. This may be a plain molding, or the rope-pattern molding. If the inscription is of a broken character, so as to permit of its being divided into groups, the molding may be arranged as in Fig. 3, which greatly adds to the artistic value of the sign. Turned rosettes and other relief ornamentation may likewise be attached to the surface of a sign.

3. Sign Tops.—A plain board is the simplest form of top that may be attached to a sign board. This may be fastened by nailing it firmly in position by means of battens or strips connecting both boards at the back, or by using bracket irons at the ends, as shown in Fig. 4. A scroll-sawed ornament is often used for the same purpose. There is no part of the sign that is subject to such variety of treatment as the top. The subject will be treated from its most practical standpoint, and the progressive student will be left to apply the principles taught to his special needs.

In Fig. 5 (*a*) and (*b*) are shown designs that are generally used. The dotted lines

on the latter indicate the proper locations of the battens, or strips, joining the two parts of the sign at the back. The ogee ribbon may also be curved sufficiently to admit an ellipse on which the store number may be placed, as shown in the figure.

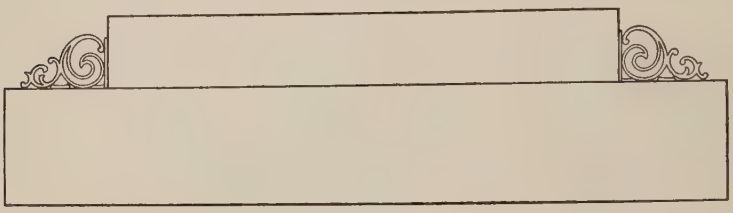


FIG. 4

4. Scroll-Sawed Tops.—Without the scroll saw, it would be impossible to produce much of the artistic work that is now used in connection with sign tops. By sawing out the design, and bringing out the details in relief with paint and brush, using strong shades and high lights, the ornamental sign top may be made an attractive feature of the sign. To prepare a design for the carpenter, it is necessary only to outline it, showing the parts to be sawed out.

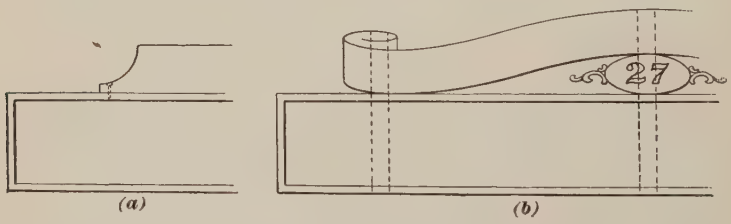


FIG. 5

This design is usually destroyed in the operation, and therefore it should be a duplicate of the original. There is a purpose in the sign top aside from the ornamental one. The firm name, store number, or descriptive matter, or an emblem or illustration, is usually placed on a shield, ellipse, or other central design. On each side of this central design and apparently supporting it, ornamental work of a well-balanced and appropriate nature is attached to the top of the sign as well as to the central design.

Fig. 6 shows the chimera and lyre. This design would be appropriate for the top of a music dealer's sign; while Fig. 7 shows the winged lion and a heraldic shield—a design suitable to any class of business.

Fig. 6

Another application of this style of ornament is shown in Fig. 8, in which the sawed design forms the centerpiece of the top. The design used, a Pegasus design, is appli-

Fig. 7

cable to a fashionable livery. An ogee-curve top, on which the ornament may be secured, could be lettered on either side with such an inscription as that shown in the illustration.

Fig. 8

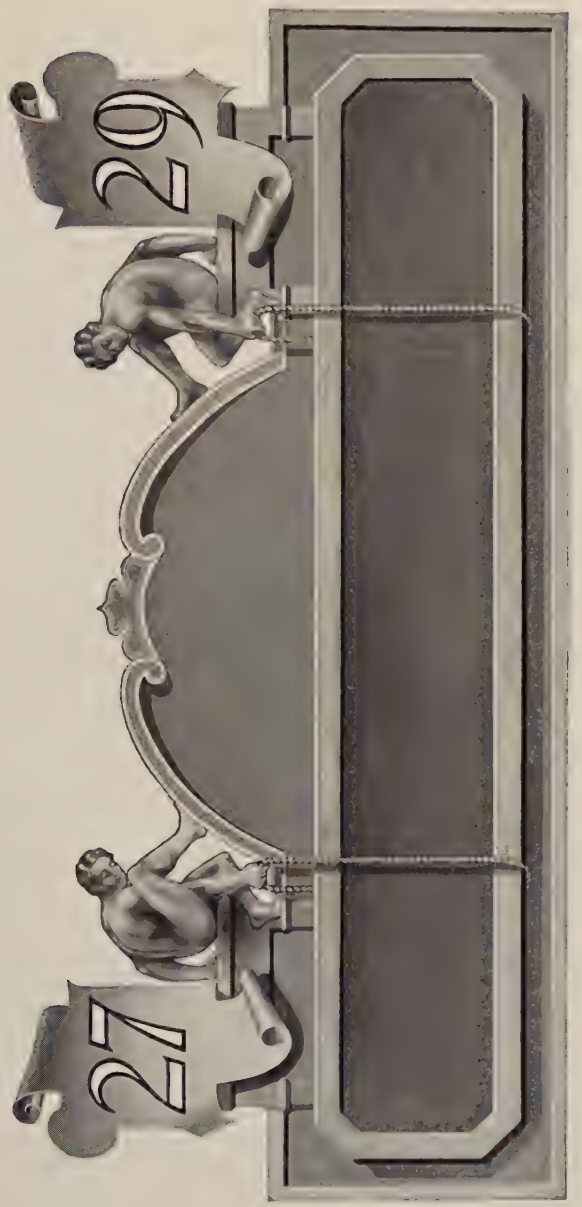


Fig. 9

There are many novelties in designs that may be worked out that will make the sign attractive. Fig. 9 shows such a novelty in the form of a sawed end-piece. In this design, the figures are apparently holding up the main portion of the sign with a rope. Actual rope, painted or gilded, should be used, while the sign should be projected from the surface by means of blocks.

5. Spindle-Work Designs.—With the present advantage of machine-turned spindles, the sign painter may construct fancy signs with greater economy than formerly, when turning by hand was the only method practiced. The utility of the spindles is shown in Fig. 10, which illustrates

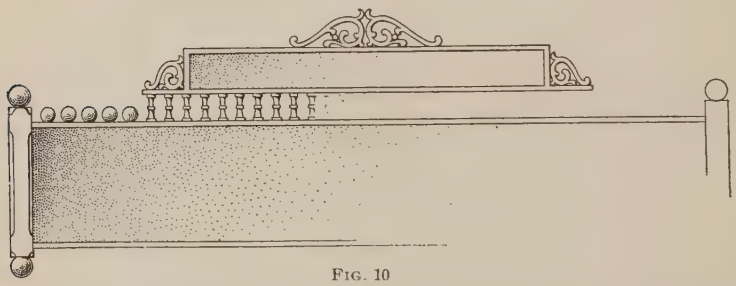


Fig. 10

only one of many uses of these, as well as the turned balls used in the composition of a sign. Turned work, when gilded, or silvered with aluminum leaf, gives a brilliancy to the sign that cannot be accomplished by any other means, and thus enriches the sign with but slight additional expense.

WIRE SIGNS

6. Advantages of Wire Signs.—Wire signs are much lighter than board signs; they offer but little resistance to a violent wind; and they present a much neater appearance on the front of a building than a heavy board sign. These three reasons alone should commend them as a superior sign for many uses. Again, the expense is a consideration in favor of the wire sign. If wire signs are thoroughly painted,

they will compare favorably with a board sign in point of durability. Wire signs are used on roofs, or they are made to project from the fronts of buildings, in order that the sign may be read from two directions. In the latter case they are hung on peg irons, to swing out from the building in the same manner as a gate, and securely fastened in position with galvanized-iron or copper wire. They may also be projected by means of a hickory or oak pole, from which the wire sign swings with the wind. They are likewise used on the edges of wooden awnings, balustrades, and balconies.

7. Designs for Wire Signs for Roofs.—Roof signs are the farthest removed from the observer of any form of sign, and therefore they should be plain, unornamented, and

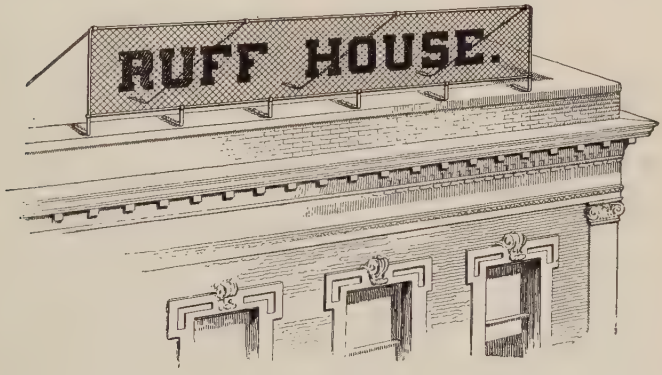


Fig. 11

of large mesh. The letters for roof signs are usually made of sheet metal or wood. Wooden letters are attached with small staples, and metal letters are attached with copper wire, the holes necessary being punched close to the edges of the letters and near crossing wires. Fig. 11 shows a roof sign with letters attached; also the number of braces and stays necessary for a sign of such proportions. Zinc, sheet tin, or galvanized sheet iron, is the best kind of sheet metal to use for letters. If the letters are larger than the regular size of the sheet, their parts may be soldered or riveted together. Wooden letters are made of boards (kiln-dried

pine) the width of the stroke of the letters and 1 inch thick, fastened together by cutting the ends and fitting them together, so as to leave a smooth, even-faced letter, as shown in Fig. 12.

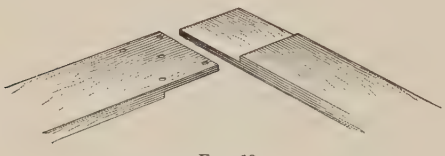


Fig. 12

8. Projecting Wire Signs.—There are many designs suitable to this style of sign. A single illustration will serve, however, to give the student an idea of the fastenings and general arrangement with regard to panels, design of frame, etc.

In Fig. 13 is shown a swinging wire sign projected on a pole. This sign may be read from opposite directions by

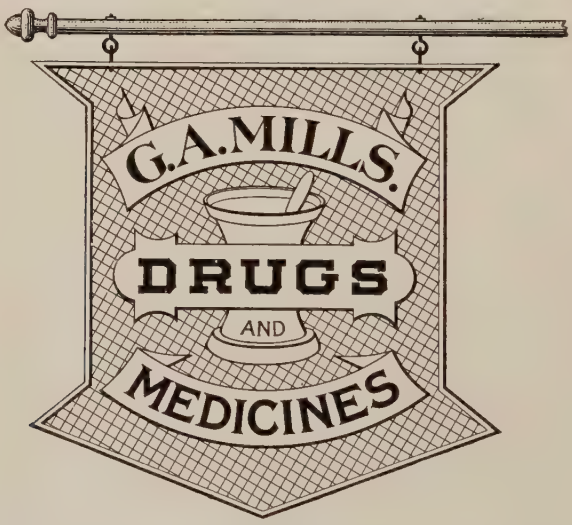


Fig. 13

cutting zinc strips into ribbons and panels; and, after they have been painted and lettered to suit the purpose, they are fastened back to back on the wire. The frame maker, or wire worker, should leave a loop in the frame through which an open screw eye may be inserted. Two guy wires are sufficient to hold the pole in proper position and bear the weight of the sign.

Fig. 14

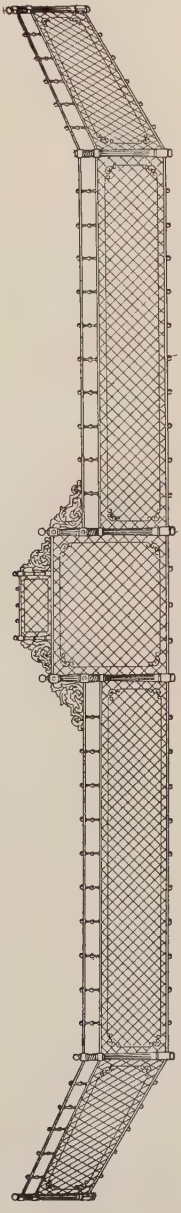


Fig. 16

Fig. 14 shows an ornamented-frame, projecting wire sign. This style of sign is intended to be placed close to the building, from which it is projected by means of peg hooks and eyes, shown in the illustration. The back iron of the frame should extend far enough above and below the body of the sign to include the ornamental ironwork.

9. Wire signs for awnings are intended to be read from one direction only; the letters may therefore be attached to the wires, and panels and ribbons discarded. In view of this, the sign painter has a great opportunity for the display of his skill in the carving of signatures, trade marks, etc. The letters used for these signs are rounded and gilded. When these signs are placed on a corner, they may be

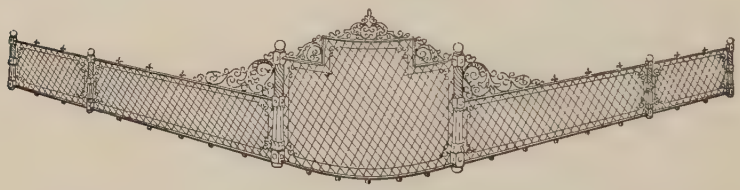


Fig. 15

treated in design after the manner shown in Fig. 15. These signs being placed nearer to the eye of the pedestrian than any other form of wire sign, the ornamental feature of the design is more carefully considered, and every form of embellishment is used, such as ornamental turned posts, carved-wood designs in relief, and cast-iron ornaments that may be attached to the frame, as shown in Fig. 16.

ELECTRIC SIGNS

10. Utility of the Electric Sign.—With the advent of electricity as an illuminant came the desire to apply it in connection with the sign. The skill of the electrician, metal worker, and sign painter has produced a number of novel applications along this line, many of which are destined to be permanently used.

The **flash sign,** although still regarded as a novelty, is very generally used; but the expense involved in its operation

confines its use at present to the main thoroughfares of large cities. One of these signs may be made to flash a large number of words successively, a few at a time.

11. Detached-Letter Electric Signs.—One of the most serviceable forms of electric sign is the **detached-letter electric sign.** Nearly half the letters of the alphabet present the same outlines when read from the back as they do when read from the front. These letters are A, H, I, M, O, T, U, V, W, X, and Y. The other letters, when used to show from two opposite directions, must be duplicated and placed back to back. For illumination, these letters are cut out of wood 2 or 3 inches thick, or they may be made of sheet metal by cutting out each letter in duplicate and separating these by a strip of the same metal soldered at the edges. Or they may be of a single sheet, leaving the face open, thus giving a letter as shown in Fig. 17. On the face of the letter electric lamps are placed, so as to give a clearly defined letter when lighted. The letters are placed in position by firmly fastening them to two iron rods—at the top and bottom of the letters, if the sign is placed horizontally, and at the sides of the letters if they are to read from the top downwards. Such letters as cannot be used to show from opposite directions are duplicated and placed back to back. These are made one-half the thickness of the others, so as to make all of equal thickness when placed together. The confusion of outline is overcome by painting the face of the letters white, or covering them with aluminum, and painting their backs black, or of some dark color. In Fig. 17 is shown also the number of lamps necessary to properly illuminate a letter. A special incandescent lamp is used for sign letters, known as the *sign lamp*, which is much shorter than the one used in interior illuminating.

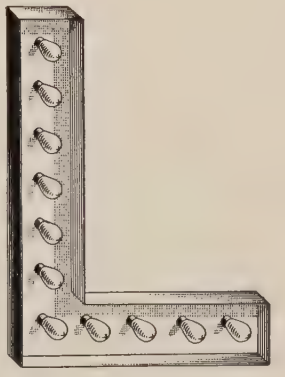


Fig. 17

SPACING AND MARKING OUT LETTERS

VARIOUS LAYOUTS

12. Use of Compasses.—For a practical tool in the sign shop, there is nothing more convenient than the pencil compasses. There are a variety of small attachments capable of holding the pencil, and that may be fastened securely on an ordinary compass. With the pencil compasses, the letterer may draw lines to limit the height of the letters, using the edge of a sign board for a guide. The compasses, in connection with the T square, may be used also to give a proper width to the stroke of a letter.

13. To Locate the Letters.—The following inscription, for example, is to be placed on a sign:

James Johnson & Co.
Boots and Shoes

The name is to go on a board attached to the top of the main body of the sign. The latter bears the words indicating the character of the merchandise sold by the firm. The board, having been painted with three coats of paint, is ready for lettering. First, draw the horizontal lines with the pencil compasses; this will give the required height of the letters. Then mark off with the compasses the spaces for the letters. The style of letters chosen for the name and the business description must be such as will best suit the size of the sign and give a harmonious effect to the whole. A New York Roman letter may be chosen for the firm name, and a Full Block or a Half Block letter for the description on the lower portion of the sign. With the points of the compasses set, approximately, at the width of the letters, run over the space, allowing an equal distance at each end of the board. Do not mark the surface during this first operation. After ascertaining, approximately, the size of the letters, proceed to chalk them lightly by simply pointing off on the board at the points of the compasses the spaces they are to occupy. It may be necessary to repeat this part

of the operation two or three times before the letters are properly placed.

14. Spacing.—While this subject is treated in detail in *Elements of Lettering*, it cannot be too often stated to the beginner that the spacing between letters is as important as the formation of the letters. The safest method to follow in spacing is to make all interspaces equal in area. This necessitates leaving a greater distance between letters having vertical strokes adjoining, than between letters not so formed, and drawing letters that have long projections closely together. After the letters have been sketched in chalk, they may be drawn lightly in lead pencil and the chalk entirely removed from the surface of the sign. In Fig. 18 is shown the correct spacing, style, and size of lettering used on the foregoing sign board.

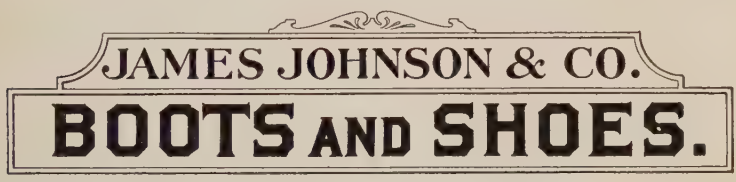


Fig. 18

A sign painter places letters on many surfaces that may not be marked on with chalk or lead pencil; he must, therefore, adopt, in such cases, some other means of marking, as it is always necessary that the letters and design should be traced in some way on all surfaces before the work of painting is begun.

15. Japanned-Iron Signs and Brass Plates.—A freshly japanned sign presents a highly polished surface, which is easily marred or scratched. The letters, for this reason, must first be designed and spaced on another surface. The same is true in regard to a brass plate. The surface is highly buffed before it is embossed, and any scratches made on the plate will remain, unless this is again buffed, which involves an unnecessary expense. The best means, therefore, of marking either of these surfaces is first

to outline the design on Manila pattern paper (medium weight). On the back of the paper rub a thin even coat of common whiting, mixed with benzine; then lay the paper pattern on the japanned-iron or brass plate, and trace the design with a hardwood stylus.

Fig. 19

16. To Center an Inscription. In marking out a design in which the lines of letters are placed on curves or angles, it is necessary first to find the center of the space, and then, with compasses or hemp twine, describe the curves, making the lines concentric; that is, describe them from the same point. If string is used (which is often the most convenient means at hand with a sign painter), hemp twine should always be preferred, since it will not stretch too easily. Hold the string on the focus point with the index finger of the left hand, allowing the string to slide underneath the finger until the point is reached where a line is to be drawn; then hold firmly. In Fig. 19 is shown a design wherein are a number

of curves that can only be drawn accurately from a center, or balanced on either side of a center.

17. Varnished Surfaces.—Lettering on a varnished surface is invariably done on the rubbing coat of varnish. This coat is rubbed down with ground pumice and water; therefore, any slight scratches are not perceptible after a finishing coat has been flowed over the surface and the lettering.

In all wagon lettering, especially on paneled wagons, the sign painter usually uses the points of the compasses, and lightly scratches the lines that limit the height of the letters. On varnished wagon tops, where a large surface is to be lettered, he uses coarse linen thread, and, after charging this with chalk, the lines are snapped on to the surface. All curves are made with chalk sharpened to a fine point.

18. Rough Surfaces.—On all brick, stone, or rough-board surfaces, the sign painter relies entirely on the chalked line for snapping on the lines. If the surface is white, string charged with charcoal will serve the same purpose as chalk; either material is readily dusted off when the lettering is completed and thoroughly dry.

19. Marking on Glass.—The pencil known as the *lithographer's pencil*, furnished by the Technical Supply Company, Scranton, Pennsylvania, is the only one that will mark on glass and leave an even, black mark. The mark made by this pencil is easily removed by moistening with water. When marking a design on the outside of glass that is to be gilded on the inside, it is necessary to mark it with a heavy black line in order to see the marking clearly through the gold leaf. If the design is to be marked on the inside of the glass, which is often the case in lettering windows, especially where it is impossible for the sign painter to stand on the outside to do the work, he must carefully proceed as follows: With the lithographer's pencil, sketch the design as lightly as possible. Then, instead of laying the gold leaf on first, as is usual when the marking is done on the outside, the sign painter should outline the letters with

black and shade them. When the black is dry, the letters may be gilded or silvered. The latter is preferred if the lettering is at a considerable height.

20. Transferring to Silk and Satin.—To transfer a design to silk or satin, in banner work, after first drawing the design on Manila pattern paper, carefully place each line and letter where it properly belongs; then, with a tracing wheel, perforate all straight lines, and, laying the pattern paper on a woolen cloth, use a coarse needle set in a wooden handle for perforating the curved lines of the letters. The design is then transferred to the silk or satin by pouncing with a whiting pad, or, if the ground is white, with charcoal or ultramarine blue.

PRACTICAL WORK

CARVING

21. Uses of the Carved Sign.—Many leading sign painters give the subject of carving much attention. A sign so treated is, perhaps, the most attractive of any used. To make it rich and effective, the carving should always be gilded or silvered. The carving most suitable to the requirements of a sign painter is of three kinds: relief ornament, beveled letter, and the grooved or veined outline surrounding the letter.

22. Ornamental carving is often confined to the top or ends of a sign, and the character of the ornament used must conform to the space devoted to it and harmonize with the idea and contents of the whole sign. In treating the subject, the styles of relief ornament used for carving, as well as the proper location of such ornamentation, will be shown.

23. Method of Procedure.—For carving in relief, the style of ornament must be pronounced in outline and formation. When a relief ornament is painted on a surface with a brush, it may be somewhat indistinct in character in some of

Fig. 20

its detail, but this cannot exist in the carved ornament. A carefully prepared design should be made and shaded, in order that the carver may follow the motive throughout the work. If the sign painter desires to execute the carving himself, he should select clear, straight-grained pine, of sufficient thickness to include the extreme projections of the ornament. If the projections are greater in some places than in others, an additional thickness may be glued on to such parts; this will save time, and avoid cutting away material uselessly. The pattern may be made on Manila pattern

Fig. 21

paper, outlined with black, and shaded with water-color black or charcoal gray. To begin on the carving, cut away the wood until the design has been roughly projected. This may be done with a large chisel, using great care not to cut the wood with the grain, to do which would entail serious consequences. The details of the ornament may now be worked out with smaller chisels and gravers. The irregular edge of the ornament may be cut with a band saw, either before or after the carving is done. In Fig. 20 is shown a sign entirely surrounded with a relief ornament. For all

practical purposes, when an inexpensive sign is required, a plainer ornament can be used, and one requiring but little time to carve. Such a design is shown in Fig. 21.

There are many varieties of twisted-wood, embossed, and turned moldings that may be obtained at a small cost, and that are made by machinery, though they closely resemble hand work. These moldings may be used by the sign painter with great economy, and they present, when painted and gilded, an appearance equal to the finest hand work. This style of molding is used to the best advantage on long sign boards, and is bradded or glued on from 4 to 8 inches from the band. This is shown in the beaded molding within the design on Fig. 20

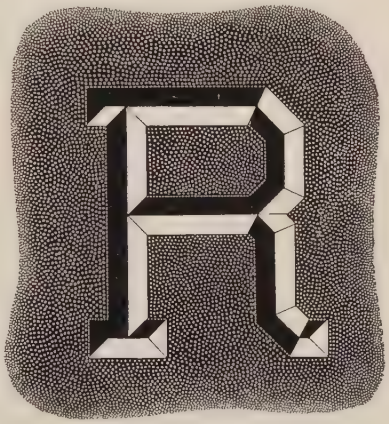


Fig. 22

24. Letter Carving. The object of letter carving is to embellish the sign and make it more attractive. All carved letters should be gilded. The style of carving that will show the luster of the burnished gilding to the best advantage is, therefore, the most serviceable to the sign painter. This is found in the beveled carving. The sides of the letter are cut down into the surface of the board until they meet in the center of the letter, as shown in Fig. 22. The letters may be cut to different depths; but, on one sign, all letters must be of a uniform depth, or the appearance of the sign will be greatly marred. To carve the letters, first mark them out carefully on the board, before any paint has been applied; then, by the use of a flat chisel, of a size suited to the size of the letter, the work may be executed. Care should be exercised in using the chisel that the bevel on the side opposite the one on which the carver is working is not defaced by

slips of the chisel. Such slips are very liable to occur, especially with a novice at the work.

25. Veining.—There is no form of letter carving that may be done so quickly and that will add so much to the artistic appearance of a sign as **veining.** This is confined exclusively to the outline of the letter, and is accomplished with a small carving tool that resembles a gouge. To outline the letters, they should first be accurately marked out on the pine surface, before paint has been applied. The handle of the tool is held in the right hand, and the blade is guided with the left. With a little practice, one who has had no experience in carving will be able to carry a straight line at a uniform depth and turn all curves symmetrically.

Fig. 23

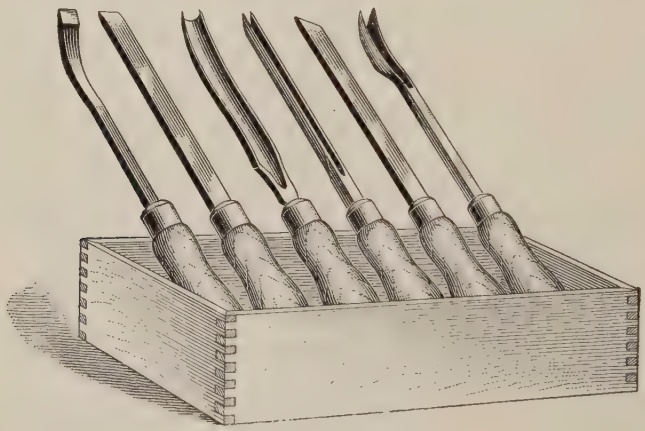


Fig. 24

A letter that has been outlined with the veiner should always be gilded or silvered, in order that the work will be enriched by the burnish of the gold or silver leaf.

Carver's punches, shown in Fig. 23, are often used in connection with this form of carving, to produce a matted surface, either within the letter or on the background. When the

latter is matted, it and the veining are gilded. The interior of the letter, in this case, is filled in with a glossy black.

26. Tools.—There are a number of styles of carving tools: straight and skew chisels, straight and curved gouges and veiners, adapted to every requirement in carving; for a generally useful set of carving tools those shown in Fig. 24 are recommended.

Of the ordinary flat chisels, a set of twelve, ranging from ¼ inch to 2 inches, would be necessary.

MIRROR SILVERING

27. Uses of Silvering.—Quicksilver mirrors are somewhat whiter than those made with the nitrate-of-silver process, but for all practical purposes, the latter process will be found sufficient by the sign painter. It is very useful in the preparation of glass signs. No background is more attractive than a mirror. The lettering may be done on the face of the glass, or it may be placed on the silvered side of the glass. If done on the silvered side, the letters or design should be given a final coat of hard-drying finishing varnish and allowed to remain until thoroughly dry before the silvering is attempted. Many sign painters add to their incomes by a knowledge of the process of silvering mirrors for the furniture and picture-frame trade, although this is entirely a side consideration.

28. Materials Necessary.—In order that the necessary solutions may be properly prepared and the work accomplished with the best results, it is necessary that the student should provide himself with the following articles:

An 8-ounce graduated glass
1 gallon of distilled water
A glass funnel
3 ounces of Rochelle salt
A medicine dropper
½ ounce nitrate of silver
One Florence flask, or a 1-quart granite-iron vessel
A 1-quart porcelain pitcher
A piece of felt attached to a handle
Scales, with grain weights
2 ounces of ordinary jewelers' rouge
½ pound of common whiting
Several sheets of filter paper
Two perfectly clean 1-quart bottles

There are two mixtures used in this process, which may be known as *solution No. 1* and *solution No. 2*. Before beginning on the preparation of the solutions, give the two quart bottles two or three coats of black paint on the outside, to prevent the light from penetrating the glass and destroying the quality of the mixtures. The solutions may be preserved for future use by taking this precaution, which, therefore, is a means of great economy to the sign painter.

29. Solution No. 1.—In the granite-iron vessel place 18 ounces of distilled water; add $1\frac{1}{2}$ grams of nitrate of silver and $1\frac{1}{2}$ grams of Rochelle salt. Boil this mixture for 5 minutes. Arrange filter paper in the form of a funnel, firmly closing the end; then place this within the glass funnel, filter the solution into one of the quart bottles, and label it No. 1.

30. Solution No. 2.—Thoroughly rinse the granite-iron vessel and put 18 ounces of distilled water in it. From this amount, pour about 4 ounces into a perfectly clean tumbler. In the tumbler, put 2 grams of nitrate of silver. Then cautiously drop liquid ammonia into it until it becomes dark; then continue dropping until it becomes clear again. Add 2 grams of silver, thoroughly dissolve, and pour the mixture into the distilled water remaining in the granite vessel. This should be filtered into the second quart bottle, in the same manner as in the first case. Two solutions are now prepared, and are ready for the application.

31. Preparation of the Glass.—It is very important that the surface of the glass should be perfectly clean and free from the slightest trace of dirt or grease. Nitric acid is used to remove grease. It may be surprising to some to learn that a finger touch on a clean surface leaves an imperceptible oil mark, traces of which are liable to appear when materials are used that are opposed to oil or grease in any form. To insure a clean surface, observe the following rules: Polish the glass with felt and rouge, after which it should be washed off with whiting and water (using about 1 teaspoonful to 1 pint of water). Rinse off the glass finally with distilled water.

32. Application of the Silver.—Into the quart pitcher pour equal quantities of the two solutions, sufficient to cover the entire surface of the glass. When mixed well, pour over the glass, and allow it to stand 30 minutes. Pour off the surplus, and, when dry, rub it well with a clean chamois skin. Coat the back with light-colored shellac, then with a coat of gray or light-drab paint. Finally, cover the back with a coat of asphaltum varnish.

33. Suggestions.—It will be found necessary to level the glass in order that more material shall not be used than is necessary to cover the surface. A small spirit level will serve this purpose.

It is well to keep all tools and materials for silvering glass in a closed cupboard.

Plate glass invariably gives the finest mirror, and produces the best results in all kinds of silvering.

If any imperfect spots appear in the work, flow on another application of the solutions, and let this stand 30 minutes before moving.

WHITE-ACID PROCESS

34. Character of the Work:—It is a popular, as well as a most substantial form of treatment, to letter the clear glass doors and windows of banks, mercantile buildings, and business places in a manner that closely resembles frosted glass. Trade marks and elaborate designs, as well as plain lettering, may be placed on the glass by means of acid, thus providing a sign that, besides being easily read, has an artistic and permanent appearance and does not obstruct the light —the two most important points in favor of **white-acid lettering.**

35. Preparing the Design.—First, make the design on medium-thick Manila pattern paper, with card black or coach black (ground in japan); after which the design may be fastened to the outside of the glass with mucilage, or it may be perforated and pounced on with whiting. The design may then be followed on the inside of the glass.

Asphaltum of the best quality should be used to letter the inscription and trace the design. The glass within the outlines of the letters must be left clear—that is, the letters must be cut in, covering the clear glass surrounding the design, as well as the surface of the glass below. This prevents the acid from coming in contact with any portion of the glass that is not to be treated. In order to be sure that there is asphaltum enough to resist the action of the acid at every point, a second coat of asphaltum is necessary.

36. Formula for Acid Solution.—Use only ceresine or rubber bottles, as hydrofluoric acid acts directly on glass and vitreous surfaces of all kinds. The solution should be prepared as follows: To 1 pint of water add 1 pint of hydrofluoric acid and 5 ounces of bicarbonate of ammonia. Allow this mixture to stand for 24 hours before using.

37. The Etching Process.—After the asphaltum has become thoroughly dry, which usually requires from 24 to 48 hours, the acid may be applied as follows: Flow on a copious supply with a camel's-hair brush from 1 to 2 inches wide, covering the entire design. Allow the acid to remain on the glass 18 minutes, and then rinse it off with clear water; the result will be lettering, or a design, in close imitation of frosted glass. Remove the asphaltum with turpentine and clean the glass finally with whiting and water.

GLASS CHIPPING

38. Effect Produced.—The process known as **glass chipping** is accomplished by scaling up the surface of the glass by applying a strong adhesive and allowing this to dry. When complete, the result very closely resembles the effect produced were it possible to do the chipping with a chisel. The markings made in the glass by using the glue process, which will be described later, are similar to those seen on a frost-covered window pane. These often take on the character of a design in leaves, vines, branches, etc.

39. Preparation of the Glass.—Plate glass should always be used for this process. The glass should first be thoroughly cleaned. There are two methods used for protecting the clear glass, or the parts not to be chipped. One is to use heavy tin-foil, and fasten this on the glass with tripolite. Then grind the parts exposed (the clear glass) with coarse emery powder (Nos. 36 to 46, or No. 54). This will destroy the surface of the glass, so that it will be readily acted on. The other method is to use asphaltum varnish (best quality) and letter on the inscription, border, ornaments, etc. with two coats of this. When thoroughly dry, the emery may be used, or hydrofluoric acid mixed with an equal quantity of water may be flowed over the glass and allowed to stand about 20 minutes, long enough to most effectually destroy the vitreous surface of the glass surrounding the letters. In using the acid, the edges should be banked with a beeswax dam. If the chipping extends to the edge, coat the back and the edges of the glass with asphaltum. It is always more satisfactory to use the acid than the emery, although the student is advised to try both methods. After this has been accomplished, the glass is ready for the finishing process.

40. Application of the Glue.—Use soap and water to clean the acid from the glass, and afterwards rinse well with clear water. Before applying the glue, the surface of the glass should be moistened with water, using a clean sponge for this purpose. Use Cooper's best glue, or the kind known as "Western" glue, made by the Western Glue Company, St. Louis, Missouri. Boil the glue until all lumps have disappeared. Give the glass an even coat, thick enough to insure covering well in all parts. If too thick, the chipping will not begin readily; if too little is applied, it merely spots the surface of the glass and entirely fails to do the work. In the former case, however, the action of the glue is often hastened by tapping on the face of the glass with a penknife. It is well to experiment on a small piece of plate glass in order that the proper quantity of glue may be known. After

the glue has finished its work the glass should again be cleaned, after which it is ready for gilding or silvering.

Silver backgrounds are preferable for this style of sign, having the tendency to bring out every detail of the work conspicuously. The silvering may be done with the mirror-silvering process, or with silver leaf and gilding water.

Beveled plate glass makes the richest sign; and when this is used the clear border should always be shown on the edge of the glass extending about $\frac{1}{8}$ inch inside of the bevel. The bright silver edge greatly enriches the effect of the sign.

FROSTED WINDOW PANELS

41. Advantage of Frosted-Panel Signs.—The frosted panel has a twofold advantage to commend its use as a practical sign: first, it occupies a space so small, and so far removed from the direct line of vision, that the view of the observer is not obstructed when drawn to the window display; second, it is easily read, and forms a transparent sign that can be read at night as well as in the daytime.

42. Plain Designs.—The most inexpensive window panel is made by outlining a rectangle in black on the inside of the glass and lettering the inscription backwards in plain black. When the black is dry, the panel may be frosted with white lead and stippled according to instructions given in *Lettering and Sign Painting* under the heading Frosting on Glass. After the frosting is finished and before it has dried, the white lead that has overlapped the black line may be cleaned off with a soft cotton cloth.

43. Gilded Designs.—Gold leaf is more often used than black on the border of the panel, but the lettering should invariably be black. The frosting may be tinted with red, green, blue, or yellow, and thus a pleasing harmony of colors may be obtained. In Fig. 25 is shown a design in which *a* shows the center or body of the design, which should be white. The background for the ornament in this design may be blue; *b* shows the gilded border. The outlining only

being in gold leaf, the border and ornament may be frosted with cream, yellow, or salmon; or it may be backed with a solid coat of one of these.

When the window panels are placed on a store front having a window on either side of the entrance, they should always

Fig. 25

be placed on the side of the glass nearest the entrance, about 5 feet from the window floor, and as close to the window frame as is consistent with the symmetrical appearance of the design. When a design is used that is irregular in outline, it should be reversed when placed on the opposite window. In this, as well as in other kinds of sign painting,

Fig. 26

there is an opportunity for great variety in designing. In Fig. 26 is shown one style of freehand design used for this class of work. Diamond-shaped panels, heraldic shields, and fancy rococo panels are among the styles generally chosen for frosted window panels; and these may be made most artistic.

ETCHING ON GOLD LEAF

44. How Accomplished.—Elaborate designs may be worked out in gold leaf on glass signs or windows after the gold leaf has been applied to the glass. This is done by first pouncing the design on to the gold leaf with whiting through a perforated pattern. Then proceed to outline the design with a hardwood stylus, maple or hickory being the best for this. After outlining the design it may be shaded by scratching the gold where shade should show. The instrument used for this purpose is usually made by the sign painter himself. It is constructed by clipping the heads from several pins or setting coarse needles in a handle. It is well to have two or three of these tools, with from two to six needles set in a straight line and fastened in handles, so as to bring the points an equal distance apart and allow them to touch the surface of the gold at the same time. With these points the gold may be scratched away and the shade blended evenly into the plain gold, as when using a lead pencil in drawing on paper.

When the etching is finished, back the entire design with asphaltum, following immediately with a coat of varnish and oil black, that is, after the asphaltum has dried sufficiently to permit of clearing away the surplus gold leaf outside the design.

45. Shading Designs With Asphaltum.—Another method of shading designs in gold leaf is to outline the design in black on the surface of the glass and, when dry, use asphaltum thinned with varnish until transparent; after this, lay in the shades, beginning with the lightest. Cover the entire space to be shaded with this coat, following it, as soon as dry, with each successive shade. Each coat of asphaltum should be strengthened until the deepest shadows are reached, which may sometimes require several shades, or coats of asphaltum. When the shading is dry, rub the design gently with powdered rottenstone and thoroughly clean the glass by rinsing with clear water. Gild the design and back the gold leaf as usual, covering the entire design to the black outline.

WIRE WINDOW SCREENS

46. Uses of Wire Window Screens.—Wire screens are often made to cover the lower parts of windows, and are used mostly in wholesale houses, or in places of business where the window is not used for displaying goods. These screens are made of a fine-mesh wire that is usually fastened on oak, cherry, or pine frames, painted with some dark color.

47. Lettering Wire Screens.—Letters are painted or gilded on the wire, or cut out of sheet tin and fastened on the wire screen. If done in the former way, paint mixed of white lead and varnish is used, and the meshes of the screen filled with one or two coats where the letters occur. When dry, the letters may be sized and gilded. Shading is usually done on the open meshwork, and the color applied so as not to fill the meshes. When letters are made of sheet tin, first ascertain the exact width and height they should have; then mark and cut them out as follows: Use a sharp-pointed instrument in marking them out, then proceed to cut all portions of letters that may be easily cut with tin snips. The inside of such letters, as in O, R, etc., should be cut on an end-grained maple block, using steel chisels for the purpose. To meet all requirements, a variety of these chisels is necessary.

The next operation is to solder tie-wires to the back of each letter, by which they are firmly attached to the screen. This should be done before the letters have been painted. In soldering the tie-wires to the letter, the wire is first bent to the shape of a staple, and then held in position with pliers, a little soldering flux or soldering salts or muriatic acid and zinc being put on the parts to be joined. A small piece of solder is placed on the metal at the point where the wire is to be joined to it, and a blowpipe flame applied until the solder flows and the pieces are thoroughly united. If a soldering bit is used for soldering, the pieces are prepared in the same manner and the solder is applied with the hot bit, letting the point of the bit rest on the metal until the pieces are thoroughly united. The face of the letter is then cleaned

with benzine and a soft cloth. The letters are sized with a thin coat of slow size, and gilded or silvered the following day. A usual form of treatment is to run a stripe of black about $\frac{1}{8}$ inch wide around the edge of the letter; another and more artistic treatment is to high light the edge at the top and right side of strokes with cream color, and stripe the left and bottom edge with a color made by adding burnt sienna and burnt umber to the cream color used for high lighting. When dry, the letters are placed in their proper positions on the screen and firmly fastened by twisting the ends of the tie-wires together.

TRANSPARENT LAMP SIGNS

48. Inexpensive and ornamental lamp signs are prepared by employing a sheet-metal worker to make a frame with a solid top and bottom, and a back fitted with a

(a) (b)

Fig. 27

metal door, the three open sides being closed with glass. These lamp signs may be made cheaply, or they may be quite elaborate in their construction. Fig. 27 shows two lamps, one (*a*) of simple construction, and the other (*b*) so

made that ornamentation can be attached in many ways, thus making it very artistic and expensive. The glass is firmly set in the open sides by means of metal ears soldered on the inside of the frame, which, when the glass is placed in position, may be bent so as to clamp it on the edges and hold it securely in place. The last glass set can be fastened in position by reaching through the opening at the back of the lamp, which is supplied with a door that may be closed and fastened. The most inexpensive treatment of the glass for a transparent lamp is to first frost the inside with white lead, as described in *Lettering and Sign Painting*, and then letter the outside of the glass with plain black. Permanent frosted glass may be used. Gold lettering with a black outline or

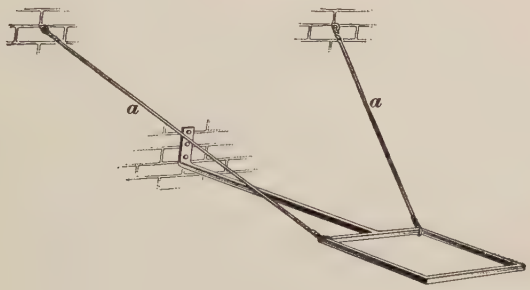


Fig. 28

shade is used on this surface also. The most artistic as well as expensive form of lamp sign is made of stained glass, in which letters are etched with hydrofluoric acid or by the sand-blast process. By either process, the colored surface of the glass is removed and a white letter shown. This style of transparent lamp reads well in daylight, and is especially attractive at night.

There are many ways of painting and ornamenting a lamp; dark colors may be used for different portions of the body of the frame, and gold leaf and bright colors for striping and ornamentation.

Transparent lamps are set on posts, hung from ornamental cranes, or set in frame sockets that are projected from the building, and firmly stayed and supported.

Fig. 28 shows a square frame in which a square lamp may be set. *a*, *a* show wires, or rods, that are fastened to the corner of the frame and carried at an angle of 45° back to the building and secured. If heavy galvanized wire is used for this purpose, it should be painted black after it is placed in position.

FRAMING CLOTH SIGNS

49. A sign painter may be properly called a "jack of all trades." He is often compelled to rely on his own ability to undertake and finish certain kinds of work, which he may easily do if he possesses a sufficient amount of mechanical aptitude. The chief reason why he should possess the knowledge necessary to construct any kind of work is that a special workman is not always available when wanted. It is also a matter of economy to be able to do as much of the work as possible in the sign shop, instead of giving small jobs to the sign carpenter. The framing of cloth signs, the making of small beveled sign boards and plain sign boards with square bands, constitute the class of work that any sign painter should be able to accomplish himself.

50. Constructing a Frame.—Strips of pine should be used, of such a size as will best suit the size of sign. For example, a sign 3 ft. × 18 ft. will require a strip $2\frac{1}{2}$ inches wide and $\frac{7}{8}$ inch thick, with three braces $4\frac{1}{2}$ feet apart, as shown in Fig. 29.

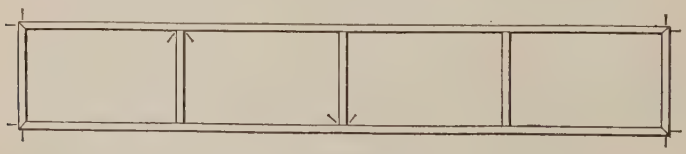


Fig. 29

It is always better to use the patented miter-box with saw attached in order to insure perfect miters, although an ordinary miter-box is easily and quickly constructed, and can be made accurate. After mitering the side- and end-pieces, nail them together with wire nails, using the kind known as brad heads, 3 inches long, or standard steel wire nails, 12D.

When the frame has been nailed together at the corners, saw three cross-pieces of equal length, measuring close to one end of the frame. These may be set in place with nails driven in at an angle, or "toe nailed," to use the carpenter's expression. In doing this, the sign maker must be careful not to allow the ends of the nails to come to the surface of the frame.

51. Stretching the Cloth.—In placing the cloth on the frame, the edges may be entirely covered by allowing enough cloth at the sides and ends to reach around and be fastened at the back of the frame with tacks; or it may be tacked on the edge. The former is preferable, especially for signs of a substantial character.

Cut the cloth the required size and lay it on the surface of the frame; then secure one end of the cloth in place by tacking it, with two tacks in the center, on the edge; next, go to the other end and draw the cloth tightly, but not too hard, and place two tacks in this end likewise. Now, in the center of one side, on the edge, place a tack, being careful not to pull the cloth too far from a center line. From the opposite side draw the cloth tightly and secure with another tack. Proceed by placing tacks close to those that have so far been driven, and draw the cloth at the same time toward the corner of the frame. Do not put in more than two or three tacks in one place at one time, or the cloth will be drawn to one side, and wrinkles will appear that cannot be drawn out; several tacks need, occasionally, to be redrawn and the cloth readjusted. If the four corners are reached successively in the operation, the work will be satisfactory—the cloth even and tight, without showing the slightest wrinkle.

Cut the corners of the cloth by pinching it together with the thumb and forefinger and cutting, with a pair of shears, as close to the corner of the frame as possible; then tack the edges down firmly.

TEMPORARY DECORATIONS

52. Exterior Decorations.—A sign painter's business during the year is largely augmented by special events that mark the social life of every commercial city. These occur in the form of gatherings of people at conventions, fairs, exhibitions, and parades, and in the observance of holidays. At such times, the merchants and citizens decorate their places of business and residences. During holiday seasons churches are elaborately decorated. In all these cases the skill of the sign painter is called for. In outside decorations on buildings, portraits, emblems, and plain lettering comprise the work usually required. Scumbled and oil portraits are used for such occasions, according to the liberality prompted by the occasion. Lettering is done on white sheeting, bunting, silesia, etc., for hanging and streamer signs. Such materials as cardboard, pressboard, and fiber board are cut in the form of emblems, designs, etc., and these are lettered and colored with water colors if used inside, and with oil colors if used outside of buildings.

A square or oblong frame is most easily constructed and covered with cloth, but it is within the decorator's power to change its shape by the trimmings to a circle, round, ellipse, or a shield by covering or puffing the edges ingeniously with bunting and rolling the cloth used for trimming so that it will form various designs. Frames for cloth signs may often be dispensed with by hemming the edges of the cloth at the top and bottom, leaving the hem wide enough to run a heavy hemp cord or a light rope through the hems. This will serve to fasten the sign in place. The corners of the cloth should be secured to the rope, or the cloth will slide to the center with the action of the wind

53. Interior Decorations.—Greater elaborateness is possible with **interior decorations** than with exterior decorations. More delicate material may be employed for this work than could be used if exposure to the weather were involved. All art work is usually painted in water

colors, and roll paper used instead of cloth in many instances for lettering purposes. Frames for temporary paintings are often made of chestnut, ash, or oak, and planed so as to bring out the grain of the wood. The natural wood is then varnished, and when quite tacky, gold bronze is rubbed on the surface with a chamois skin.

54. Cut-Out Letters.—Mottos, wall inscriptions, and Scriptural quotations are often cut out of cardboard and artistically colored. The letters are then fastened on a wall with small gimp tacks. For inexpensive decorating, this always presents a pleasing appearance. Illuminated capitals of various colors may be employed and bronzes in imitation of gold leaf used to embellish the letters. To prepare an inscription of this nature, mark out the letters on sheets of white cardboard 22 in. × 28 in. Use such alphabets as Old English, Gothic, Roman, Church Text, etc. Place the capital letters in panels that conform somewhat to the general outline of the letters. Cut out the small letters to their outlines and the panels on which the capitals occur to the outlines of the panels. Color the capitals with bright colors and outline them with a heavy line of black. In cutting out the small letters use a pair of shears, where convenient to do so, but for the inside lines it will be found necessary to use a penknife and lay them on a piece of glass when cutting.

55. Putting Up Letters.—Space the letters that are to be placed in a given space with compasses, leaving an equal distance on each side of the inscription. This may be done while standing on the floor. Lay strips of paper or cardboard on the floor at points where words begin and end. This will aid the letterer to space the work when on a ladder. If the work requires absolute accuracy, it is well to use a light strip of wood and mark the exact spacing on this with chalk. To place the inscription on a horizontal line, use heavy thread and fasten it to two tacks set at equal distances from the ceiling or floor; this may be used for a base line for letters. Arcs of a circle may be described of any required

size with hemp twine. Stick charcoal should be used for this purpose, as it can be readily dusted off when the letters are in place. When letters are placed on a large curved line, it is advisable to space the letters by scale—about 1 inch to the foot. In such cases, begin at the center of the curved line and work in either direction.

PORTRAIT PAINTING

56. Portrait Painting in Oil.—A class of work with which every sign painter should be familiar is **portrait painting in oil.** Campaign work, as well as many forms of decorating, call for a display of the sign painter's skill in portraiture. He is usually confined to a photograph to copy from, and must therefore possess the ability to reproduce an unmistakable likeness to his subject. Sign painter's portraits are not painted for close observation (except on society banners), and the colors must therefore be much stronger and the lights and shadows exaggerated in order that they may appear normal at a distance.

The photograph should be laid off in squares and the space to be painted should be laid off in squares to correspond with the copy, as illustrated in Fig. 35.

57. The Studio.—A studio should be so arranged as to allow the light to be thrown on the work from but one direction, the same as that shown in the photograph the student is to copy. There should be no cross-lights in the room; all confusing lights may be easily curtained off. If the window that supplies the light to the room is a long one, the lower portion should be curtained. The light should come from a window about 5 or 6 feet from the floor, if possible, especially if the artist is painting a portrait from a posed subject. If the work is confined to copying a photograph, a skylight will be found to be an excellent light to work by.

58. Drawing the Outlines.—Carefully sketch the lines of the face by the aid of the squares, using stick charcoal sharpened to a point. It is necessary either to retrace the

sketching with a lead pencil or to fix the charcoal lines on the canvas by spraying them with a prepared fixative, using an ordinary atomizer for the purpose. The surplus charcoal may be dusted off when this is dry; the work is then ready for the paint.

59. First Painting.—Set the palette with burnt sienna and ivory black. These colors should be mixed together until a rich reddish brown is obtained, which serves for the deepest shadows on the face; then, by thinning this color with turpentine only, every shadow in the face may be painted in with an even tone, and the likeness secured and faithfully brought out in this first painting; after which the entire attention may be devoted to artistic and lifelike coloring. Should it be found necessary to change or erase any portion of the sienna painting, use a soft cotton cloth and clean turpentine. Allow the part where the erasure was made to dry.

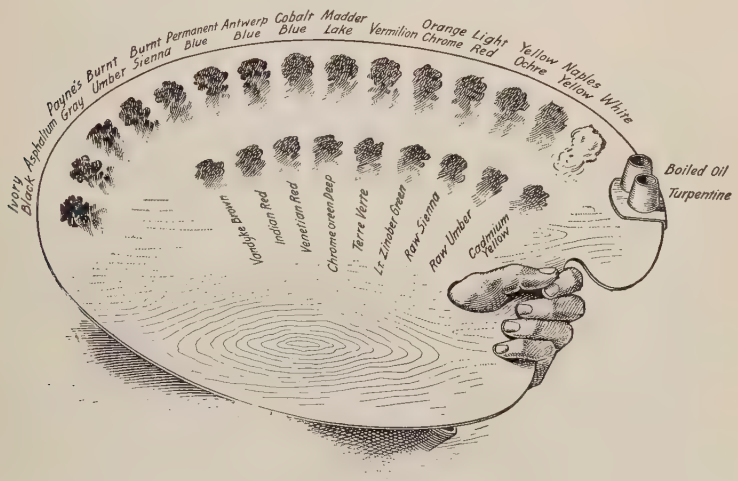


FIG. 30

60. Coloring.—Use a large wooden palette and set this with colors, beginning at the right with white, and finishing with black at the extreme left. Graduate the colors according to their strength and relation to each other, as shown in Fig. 30. Do not place more color on the palette

than will be used. Leave the lower portion of the palette for mixing colors with a palette knife. In beginning the work, make the general tone and strength of the color correspond with the complexion of the subject as nearly as possible. Lay in the colors of the hair and the drapery, and also the background, before making any study of the detail in the work. The flesh colors of the face should be laid in last. In laying in the background, colors should be chosen that will intensify the colors of the face and combine with the hair and drapings to the best advantage. This color is found in a combination of greens and burnt sienna, tempered with blues and yellows. Against the light side of the face, the background should be strengthened, and lightened against the strongest shadows of the face and bust. After laying in the entire work, blend the colors where necessary, and finish the work, as far as possible, in a single painting.

61. Colors, Brushes, Etc.—As far as possible, flat bristle brushes should be used, in order that the colors may be laid on in broad patches. For detail work, red-sable brushes, flat and pointed, are used. For glazing, a flat soft-hair brush is used. It is well to have a steel color eraser for removing surplus color from the work after the paint has dried. Many artists use fine sandpaper.

Flesh color, in its lights and half tints, is composed of silver white, Naples yellow, and light red, with a touch of ivory black and cobalt blue. This color should be laid in, beginning with the forehead on the lighted side of the face and continuing with the cheek, nose, and chin. In painting the shadow side of the face, use light red, Naples yellow, ivory black, cobalt blue, madder lake, and silver white. Do not tone this to the deepest shadows, but leave these for a later painting. Do not blend the shadows into the light flesh color or the likeness may be lost. The colors should be clear and distinct, as far as possible. The lips are then painted, using madder lake, vermilion, light red, Naples yellow, raw umber, silver white, and ivory black.

The eyes should now be painted, using such colors as the eyes of the subject especially require. The depth of the shadows and the lighting of the eyes demand the artist's fullest ability. The slightest deviation in the drawing or coloring of the eyes is more apparent than in any other part of the face. The hair, having been previously laid in, may now be more closely followed in regard to detail. Black hair calls for ivory black, burnt sienna, yellow ocher, lightened with cobalt blue, and silver white for the high lights, which are sometimes quite strong, even in black hair.

For brown hair, use burnt umber, ivory black, madder lake, yellow ocher, and white; burnt sienna should be added for deep shadows.

Reddish brown and red hair is tempered more especially with light red and yellow ocher, with the addition of cobalt blue and burnt sienna for the deep shadows.

Every light and shadow in the hair should be clearly defined, thus giving character to this feature, which should be as pronounced as any other part of the portrait.

62. Second Painting and Finishing Touches.—In beginning the second painting, oil out the work, which is done by covering the entire work with a coat of poppy oil, using a clean, stiff, flat, bristle brush for the purpose and rubbing the oiled surface well with it. Remove the surplus oil with a clean rag and proceed to retouch the work. At this stage, gray side lights, reflected lights, and glazing should be done. This will give the face a rounded appearance and the colors a natural and lifelike effect. Many artists leave the glazing and finishing for a third painting, but for all practical purposes a sign painter's portrait requires but two color paintings.

MODELING IN CLAY

63. Relief-Letter Designs.—Bookcover designs and advertising illustrations often consist of photoengravings made from relief designs. This style of work is growing to be very popular, and all forms of relief and projection are combined with the lettering to make the work attractive.

Photographs taken from relief lettering reproduce the strongest high lights and deepest shadows, as well as all roughnesses or defects in the work. It is necessary that the work be smoothed down finally and all irregularities overcome, as far as possible. It is not intended to treat on the subject of modeling in clay as practiced in sculpture or figure work, but only in so far as it pertains to lettered designs. There are many good books on clay modeling that are profitable to a student that wishes to pursue it beyond the point where it ceases to be practically applied in lettering and sign painting.

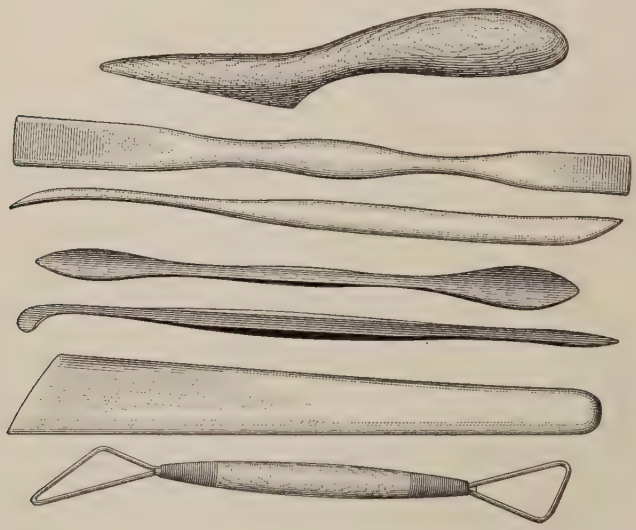


Fig. 31

64. Modeling Tools and Materials.—Modeling clay is the cheapest material to use, although it is not the most convenient, as it must be kept in water after it has once been mixed. Dry clay may be purchased from dealers in school supplies or artists' materials. It must be mixed with water and worked with the hands until it is in the form of putty, when it is ready for use. Another and more convenient material to use is **plastiline**, a composition of a waxy nature that does not dry or deteriorate by exposure to the

air. This material is very pliable and is easily worked with the fingers; yet it is firm enough to retain any position that may be given it. Plastiline, although quite expensive, is the best, and in the end the most economical, material to use.

Fig. 32

Modeling tools are made to suit every requirement of the artist, and are designed and shaped to reach and execute the various details of the work. They are made of cocoa wood, boxwood, steel, and wire. The ordinary orange sticks used for manicuring and sold by druggists are a convenient and inexpensive tool to use. In Fig. 31 are given some of the

Fig. 33

tools that are most suited to lettering and ornamented designs. The orange sticks do not vary in size or style, but they may be shaped to suit many classes of work with an ordinary penknife, or they will suit many requirements without alteration. Fig. 32 shows the orange stick.

Fig. 34

65. Operation.—Use a modeling board made of kiln-dried, clear pine. This may be used in its natural state, or it may be painted. Begin the work by outlining the panel or design, in order that its dimensions may be known, before applying the clay or plastiline. Lay on an even coat, roughly shaping up the design. Smooth all parts where letters are to be placed, and then proceed to letter the design. In Fig. 33 is given a heraldic shield with pyramidal- or prismatic-shaped letters, which are, perhaps, the simplest letters to construct. Roll out the clay or plastiline in the fingers until it is approximately of the size required for the stroke of the letter; then press it into pyramid shape by laying it lengthwise on the forefinger of the left hand, using the thumb and forefinger of the right hand to shape the stroke. Then lay on where letters have been sketched out on the background of the design. Letters may be either projected from the surface or sunk into it by pressing them in or cutting them out in imitation of carving. In Fig. 34 are given a few examples of letters and ornamentation that may be used, and that are most practical because of their simplicity in construction.

POSTER DESIGNING

66. The Hand-Painted Poster.—Business houses have in recent years employed large, hand-painted, fence posters for local advertising purposes, and when only a very small number of these posters are required, it is the most economical means that may be adopted. Art lithographing and printing are the best processes to use, for manifolding, but when from one to a dozen only of these artistic posters are required, the work falls into the hands of the sign painter. If he is an adept in the art of making bold and attractive designs with but little work, his success as a poster writer is assured. His first aim, therefore, in designing the poster is to make the work appear to be a carefully studied design and to omit all detail that consumes his time needlessly.

67. Setting Up a Poster.—The large posters in general use are from 20 feet 7 inches to 27 feet 5 inches long, and 9 feet 1 inch high. The size of the sheets is 28 in. × 42 in. Therefore, the former poster would contain twenty-four sheets, or be six sheets in length by four in height. The latter poster would take eight sheets in length by four in height. There is a margin of 1 inch left for the lapping of sheets at the bottom and left side of each sheet, except in the last row of sheets at the left and bottom of the poster. In accomplishing the work it is necessary to have a wall space of 28 ft. × 10 ft. in order that the entire poster may be set up.

68. Arranging the Design.—The general arrangement of a design always depends on the inscription. But this may be broken or changed to fit the shape of the poster, and prominent words in the reading matter requiring special attention may be placed on a panel or colored in order to give them greater prominence. In arranging the design, useless detail should be eliminated, and such composition used as will give the whole an artistic effect. To accomplish this, bold ornament and distinct fields of color should be used. The lettering should be clear cut, and heavy-faced alphabets should be chosen for prominent words. In Fig. 35 may be seen the general arrangement of a poster design and the amount of ornament necessary to embellish the design and make it appear equal to the lithographed poster as an attractive and artistic advertising announcement.

69. Preparation of Colors.—The colors used on a poster must withstand the elements as well as printers' ink, while the effect of the colors when the work is complete must be similar to that of water colors. It is necessary that a mixture should be used that can be reduced to the consistency of a water color, and yet have sufficient body to appear solid and even when applied. To meet these requirements there is nothing better than varnish color.

Colors should be mixed to a thick paste with a cheap grade of finishing varnish, and thinned to the proper consistency

We Lead, Others Follow
Men's
OUTFITTERS
Emporium
of
Fashion
75 MAIN ST.
The Empire
CLOTHING
Company.

Fig. 35

with naphtha. They should be applied with soft camel's-hair brushes. The flat water-color wash brush from $\frac{3}{8}$ inch to 1 inch wide and the 1-inch varnish brush are usually preferred for this class of work.

LIQUID SLATING

70. Where Used.—The sign painter is called on to letter on almost every surface. It is important that he should possess a knowledge of all surfaces and be able to apply it when necessary. **Liquid slating** is used principally in the preparation of blackboards for schools; it is also used in the preparation of blackboards for commercial purposes, and for changeable bulletin boards. On these, the sign painter often places lettering. Stock exchange boards usually require a large amount of lettering, and such boards are of large proportions.

71. Preparing the Board.—It is necessary first to select well-seasoned, clear pine ("matched stuff"), and then to construct the board, laying it up horizontally. When this has been done, a band should be fitted around the board, allowing for an extra thickness of cloth on the edge. After testing the surface to see that no uneven places are there, thin enameled cloth is applied. This is done by tacking it over the board and securing it on the edges. In schoolrooms, where the blackboard is a permanent fixture, the liquid slating is applied on the plastered wall surface. This, however, is not permitted in mercantile buildings. Before applying the liquid slating to a plastered wall, it should be coated with a size made of glue, or with shellac, which will arrest the absorption and give a smooth surface for the chalk.

72. Application of the Slating.—There are two kinds of liquid slating, the most popular being the **black. Dark green** is highly recommended, especially for school work, as more restful to the eyes than black. Sessions at the blackboard are often of long duration, and, such being the case, the use of green should be considered. The slating is

an alcoholic preparation, and therefore a brush should be used that has not been employed in oil or turpentine. At least two thin coats of slating should be applied, one each day. The sign painter may prepare the slating, or it may be purchased of any paint dealer at a reasonable price.

73. Preparation of Slating.—To prepare black slating, use 2 pounds of dry-drop black, 1 pound of pulverized pumice, 3 quarts of alcohol. Mix thoroughly, and always shake well before applying. This preparation should always be kept in an air-tight can. If green slating is desired, it may be made by adding to the foregoing formula a sufficient quantity of orange chrome yellow (powdered) to give the required shade of green. Dry chrome yellow may be used in place of orange chrome, the effect being to produce a brighter green. It is not the purpose, however, to give the slating a decided green color, but simply to show a change from black to green.

FRESCO COLORS FOR SCENIC WORK

74. Use and Preparation of Colors.—There are many occasions when it is more expedient to use water colors than to use oils, because of their drying qualities, as well as for the clear effects that may be produced with them. Water colors can be applied much faster than oil colors, and for this reason alone it is preferable to use them when the work is to be put up in the interior of a building. The sign painter is often called on to execute window backgrounds, photographer's backgrounds, scenes for theaters, etc. He may be required, also, to paint and letter an advertising drop curtain, in which case the following few suggestions will be profitable.

75. Preparation of Ground.—All scenic work is done on cloth; it is necessary, therefore, that the cloth should be so prepared as to give as smooth a surface as possible. Ordinary unbleached cotton sheeting is used; 1-yard widths are sewed together evenly and then stretched on a frame so as not to show wrinkles.

After the cloth is firmly tacked to the frame, it should be sized with a glue size, which serves to fill up the surface of the cloth and allow the water color to slide over it smoothly and readily. The size is prepared by boiling ordinary brown glue until thoroughly dissolved, and stirring about $\frac{1}{4}$ pound of it into a large pail of hot water. The design may be placed on the cloth either before or after it is sized, the former for many reasons being preferred. The size should be applied with a wide calcimine brush. When the cloth is dry, the work may be followed up with the application of the water colors.

76. Mixing Fresco Colors.—Unsized colors should be used, such as are put up in air-tight glass jars, with metal tops. These colors are thus free from dust, and do not deteriorate with long standing. It is necessary that water be kept on the top of the colors, which may be poured off before using. To apply colors, they should be reduced or thinned with glue size. White glue should be boiled in a glue pot (a double pot) until free from lumps, then poured into another vessel, and water added until, when mixed with color, it flows readily and does not rub off. Ready prepared glue, such as LePage's, may be used for sizing the colors, but this would be rather expensive to use for sizing large surfaces of cloth.

DAMASK PANELS

77. Where Applied.—This style of treatment is taken from the scenic artist's method of handling colors. There is nothing that will produce so pleasing an effect in coloring as the blending and harmonizing of colors. Leading artists have discovered and apply this principle, although not in a manner so crude as to be obvious to a casual observer. Its origin, perhaps, dates back to the ancient city of Damascus, where the fancy damask linen fabrics that exemplify this principle were first manufactured—hence the name. The scenic painter, who works for the strongest possible effects, lays bare the underlying principle that is ingeniously concealed in the work of the pictorial artist. The sign painter

applies this principle in many ways in his lettered panels and ribbons. This treatment may be applied also to sign boards.

78. How the Work is Accomplished.—Two shades of a color may be used and laid on the surface so as to meet in the center of the panel. They are then blended, so that the color gradually passes from the darkest to the lightest shades without showing brush marks or streaks, blending about one-third of the surface. The lettering color is the middle shade of the ground color. When the entire panel is lettered, this color will be darker than the ground color on one end, and much lighter on the other. A fine line of gold, silver, white, or cream surrounding the top and right sides of the letters improves the appearance of the work. If a stenciled ornament is used as a border around the panel, the same middle color should be used; but the letters may be in gold or silver.

Pink and red are good colors to use, as well as brown, gray, blue, purple, and yellow.

FANCY BACKGROUNDS

79. Indented Ground.—A new sign board may be treated, before any paint has been applied, in a manner that will give variety to the plain, smooth ground, and not only give greater prominence to the letters, but make a rich and artistic sign in all its parts. There are many forms of treatment employed, the most practical and useful of which will be given here, as well as the methods pursued.

80. Hammered Ground.—After outlining the letters with a veiner, the entire ground, with the exception of the face of the letters, may be hammered or dented enough to show conspicuously when gilded, but not enough to break the surface of the wood. An ordinary round-head bolt is the best instrument to use in order that the workman may work close to the edge of the letters. For the large areas, a round-end hammer that will make the same-sized dent as the bolt may be used. After the entire ground has been

hammered, the sign may be painted as usual—the background gilded and the letters painted with a glossy, jet-black paint, which makes an excellent sign, both for richness and legibility.

81. Rough Surfaces.—All manner of novel surfaces may be produced by the use of the cheapest available material, such as rice, corn, peas, coal (the small sizes known as buckwheat, bird's-eye, etc.), or anything else that will not be recognized after it has been painted and gilded or silvered. These materials may be applied by two methods: before the board has been painted they may be laid in glue; or, after giving the board one coat of paint, they may be applied by covering the surface with white lead and attaching the material to it while this is fresh. Relief letters are always used with these rough surfaces, and both the letters and the background are gilded or silvered. The edges of the letters may be painted with red or black.

Fig. 36

82. Diaper-Pattern Grounds.—The veiner may be used to elaborate the background in lining some such plain, simple pattern as that shown in Fig. 36. Such patterns are quickly made, and when the background is gilded they present a most attractive appearance. This treatment is sometimes combined with relief ornamentation. Turned ornaments may be glued on the surface, as shown in Fig. 37, where diaper patterns that will permit of the artistic use of

Fig. 37

such ornaments are employed. Small pressed rosettes and ornaments with slight bas-relief designs are used, both for economy in the use of gold leaf and for the general appearance of the work when completed.

These pattern grounds should be the first work done on the sign board, before any paint has been applied. The letters should be marked out carefully at the same time, in order that no work may be done on the portion of the ground that is to be occupied with lettering. Ribbons and panels are sometimes placed on fancy background signs, and the lettering done on these, in order to give prominence to the inscription, rather than to the ornamental feature of the sign.

NOVELTIES IN GILDING

83. Glass Gilding.—A most practical effect in window gilding is obtained by the use of some simple method that will give a result similar to that produced by acid etching. The process of etching with hydrofluoric acid requires much time. The price paid for some kinds of work is not sufficient to warrant the employment of this method, and the imitation effect may therefore be used. This is accomplished by outlining the design to be gilded, including the letters, with varnish. Although this is transparent, it can be readily seen on the surface of clear glass. The letterer should be careful in this outlining to keep the line of uniform width, and not allow the varnish to sag at any part of the outline. The corners or spurs of letters should be clear cut and sharp pointed, as this work determines the accuracy of the finished letter to a very great extent. When the varnish is dry, which usually requires about 24 hours, the gold leaf may be applied in the regular manner. When finished, the work shows a burnished center within the letters, and a dull or chased-gold outline. Designs may also be worked within the outlines on the face of letters by using varnish, which greatly adds to their artistic appearance.

84. Slow-Size Gilding.—Gold leaf, when first applied on slow size, is susceptible to high lighting by simply

rubbing or burnishing it with cotton batting immediately after applying. If gold leaf is rubbed in one direction, it will not be noticed that the rubbing leaves any permanent impression on the gold; but to rub one letter, or a part of a letter, in a vertical, and another in a horizontal, direction will show a marked difference that will last as long as the luster of the gold leaf remains. Therefore, in rubbing down gold leaf, all vertical strokes of letters should be rubbed in a vertical direction, and all curved strokes in the direction of the curves.

85. Gilded Backgrounds.—In gilded backgrounds lies an opportunity to work out many pleasing effects, for, by rubbing the gold horizontally, and then rubbing it in a vertical

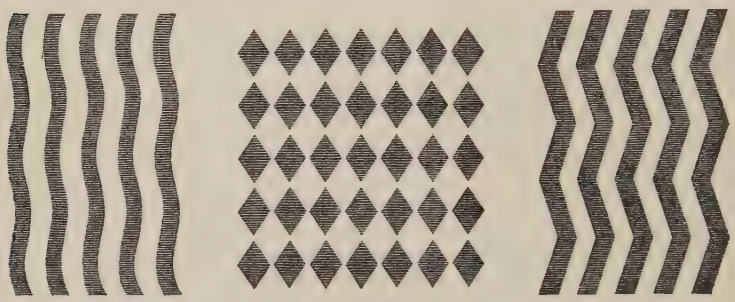


Fig. 38

direction through the open spaces of a stencil pattern, a very attractive background may be produced. There are many patterns that may be used for this purpose, three of which are given in Fig. 38. Gilded-background signs are always lettered with a plain black letter. The letters should be coated with varnish, but gold-leaf backgrounds should never be varnished or in any way treated to make the gold leaf durable. This is a serious mistake often made by novices at sign painting. No artificial luster can be given that will exceed the natural burnish of gold leaf, and varnish immediately destroys this to a greater or less extent. But in many instances, especially in wagon lettering, the use of varnish on gilded letters cannot be avoided.

QUICK-DRYING BACKGROUNDS

86. Coach-Black Ground.—Demands are occasionally made on a sign painter to furnish signs in the shortest time possible. It is not a matter of the greatest durability in such cases, but of utility and expediency. Coach black, ground in japan and thinned with turpentine only, will dry in a few moments. This is often used, therefore, for a ground for lettering. Gold letters may be applied to this surface. A quick-drying varnish may be used for shading, and a high light placed on the letters by means of dry white lead and yellow mixed with japan gold size. If the work is to remain over night before lettering, it is advisable to flow a coat of quick-drying varnish over the coach-black ground, thus closely imitating a japanned surface. Colors that are to dry quickly should be mixed from dry color, using japan gold size and turpentine for a medium.

87. Aluminum-Bronze Ground.—Another means of obtaining a background quickly is by the use of **aluminum bronze.** This gives the sign painter an opportunity to letter the surface immediately after the bronze is applied. Gold bronze should never be used if the sign is to be exposed to the weather.

88. Shellac Grounding.—When a board is painted with three coats of white lead, it requires 3 days for the painting to dry before the sign is ready to letter. But a board may be coated with three coats of orange **shellac** and be ready to letter in 2 or 3 hours. A shellac grounding is not recommended for general use for two reasons: first, it does not withstand the effects of the weather as well as white lead, the paint being very liable to peel from a shellac surface; second, shellac is much more expensive than white lead for coating large sign boards.

89. White Grounds.—There is no satisfactory method of obtaining a **white painted ground** with paint that will dry quickly and be durable. Therefore, some other means must be sought that will fulfil all the requirements of haste.

This is found in white enameled oilcloth. A large sign board that has been previously lettered and smalted may be covered with this material, which must be tacked closely to the edge, near the band of the sign, the sign painter being careful to stretch it evenly without causing any wrinkles. A quarter-round molding may then be bradded on, covering all tacks and fitting snugly into the corner of the band; this will keep out moisture coming against the surface of the sign. To further insure this, thick white lead should be daubed in the corners before the molding is applied. The molding as well as the band should then be given two coats of orange shellac and, after the sign is lettered, a coat of varnish black. If this cloth-covered sign is cut in and smalted with blue, dark-green, or black smalt, the white surface will be seen only in the letters, which will closely resemble white-varnished lettering. Such signs have been known to wear from 8 to 10 years without breaking away at the edges, the white surface remaining in a better state of preservation than if it had been coated with white lead.

PORCELAIN LETTERS

90. How Attached.—When this style of letter was first introduced there was a great demand for it in all kinds and sizes. A sign painter found it profitable, therefore, to keep on hand a large supply of these letters. At present, the demand has fallen off to such an extent that only occasionally is he called on to furnish porcelain or glass letters. Such orders may now be sent direct to the manufacturer, and thus no loss is occasioned the sign painter by carrying useless stock. These letters, as well as glass and aluminum letters, are furnished in all sizes, from 2 inches up. Special designs, including signatures, trade marks, etc., may be prepared to order.

To attach the letters, first mark out the design on the glass, using chalk sharpened to a point. Space the letters accurately with the points of the compasses. If a curved line is desired, take a piece of hemp twine, which will not stretch,

find the center of the glass, and draw a vertical line at this point; then describe a curved line from a point that will give an arc best suited to the letters as well as to the balance of the inscription.

Place the cement on the edge of the letter only, using an ordinary putty knife for this purpose. Press the letter firmly, keeping it in the exact place it is to occupy. The cement will extend beyond the edge of the letter, but leave it so until the letters are all applied. Then, beginning at the first letter, cut around the edges with a penknife and remove the surplus cement. Clean the letters and the glass with a soft cotton rag. Benzine or turpentine will quickly remove all traces of the putty.

91. Preparing the Cement.—Use dry white lead. Sift this through a fine-mesh sieve to free it from lumps, and mix with coach varnish (medium drying) to the consistency of putty, when it is ready for use. The adhesiveness of cement is greatly increased if it is allowed to stand a few hours before using.

92. Removing Old Letters.—Use a palette knife; guide the end of the blade with the left hand, and with the right hand work the blade underneath the letter. Loosen the letter cautiously on all edges, but do not attempt to pry it away from the glass, or the result will invariably be a cracked letter.

ECONOMIC DISPOSITION OF SCRAP GOLD

93. In every operation in which gold leaf is used, there is an unavoidable waste of material. Gold leaf, when reduced from its original smooth, unbroken condition, cannot be used again with economy or with satisfactory results. In gilding large signs, the gold that overlaps the edge of the letter is reduced to small particles by rubbing down and burnishing the gilding. Therefore, the remnant, or scrap leaf, should be carefully collected on the sign surface with a wide, soft-hair brush and placed in a small covered box. Likewise, in gilding on glass there is a considerable amount of gold

outside of the letters, after the letters and design have been penciled or backed. This may be saved in the cotton batting used to clean off the surplus gold leaf.

From this small saving, many sign painters realize a large amount at the end of a year. It has also been found profitable to save even the sweepings or dust from the floor of a sign maker's gilding room. Gold cotton and scrap gold leaf may be smelted by a local manufacturing jeweler, but sweepings require furnaces and crucibles that are possessed only by large smelters. Gold-leaf manufacturers usually are the most reliable class to intrust with smelting, their charges being reasonable and the returns satisfactory to the sign painter. The most convenient and the cheapest means of transporting sweepings is to collect them in a sugar barrel, which may be headed up strongly and handled easily. The freight also is less on a barrel than on any other form of package.

ADVERTISING SIGNS

94. Wall Signs.—Advertising signs are prepared with the view of attracting the attention of a large number of people. If the attempt to do this is made in a store where the manufacturer's product is on sale, a glass sign, card sign, or enameled-cloth wall sign is used. Transparent window signs also are used in store advertising. If the object is to catch the eye of pedestrians, fences and walls that face toward public thoroughfares are used for advertising purposes. So profitable is this latter medium to the merchant that persistent advertisers pay almost fabulous amounts for dead walls left exposed during short intervals of building operations, especially when these walls are located along such thoroughfares as Broadway, New York City.

Large wall signs are usually painted from a carefully prepared sketch on a scale of from $\frac{1}{2}$ inch to $1\frac{1}{2}$ inches to the foot. This makes it an easy matter for a sign painter to paint a sign of any size with accuracy. White lead mixed with boiled oil is used, and the lettering is done first. Having given it one coat of white, the letters should be cut

in with black or the color to be used for a background, and the entire space filled in. After the background is finished, a second coat of white should be applied to the letters. This is unnecessary, however, if gold color, red, or light blue is to be used for the letters, as such colors may be made to cover well with one coat. Maroon, dark blue, dark green, and yellow are the colors commonly used for backgrounds. Panels and ribbons are painted on at the same time that the background is painted, adding nothing to the expense except in the time consumed in outlining these. Under another head is given the prices charged for this kind of advertising work.

When a wall space or panel is to be relettered, the sign painter employs what is known as the **spotting-in** process. This process renders it unnecessary to repaint the panel before lettering. A design according to scale should be prepared, and instead of painting on each letter, the entire space to be occupied by a line of letters is painted with white or gold color, and the letters cut in when the paint is dry. A varnish or japan color is used for this first coat of white, and when cut in the letters may be given a second coat of white mixed with boiled oil and turpentine.

95. Fence or Barn Advertising.—This kind of work is done in precisely the same way as the dead-wall advertising, allowing for the fact that boards, particularly old and weather-worn ones, are difficult to paint, requiring the expenditure of much time and material in the operation. It is necessary, therefore, that something should be applied to the surface to be painted, or added to the paint, that will cause the paint to cover readily and will prevent the boards from absorbing a great quantity of material. Strong glue size may be prepared, and the board surface coated with it. When dry, it is ready to letter. Ordinary sal soda dissolved and added to the paint, and also melted common brown soap, will greatly improve its covering quality. There are many other ingredients used, such as quicklime slaked and stirred into white paint. The wearing quality of this, however,

does not warrant its use for outside purposes, unless the work is of a temporary nature.

96. Card Signs.—Cardboard signs are used largely for store advertising. These as well as transparent window signs may be printed by any one of the several processes, or they may be lithographed. To come within the province of a sign painter they must be hand painted, or lithographed in black and colored by hand, or stenciled. In orders ranging from 100 to 500 copies, these signs are produced with great profit both to the advertiser and sign painter.

97. Tackles and Ladder.—To place signs on high places that may not easily be reached from the ground, a letterer must use a ladder, scaffolding, trestle, horses, or a swinging stage. The latter consists of a ladder of a uniform width of about 2 feet and from 18 to 20 feet in length. A board 18 inches wide is fastened on the ladder, leaving a space of about 12 to 18 inches on each end. Tackle blocks and ropes, with four strands of rope, are used to swing the stage; $\frac{3}{4}$-inch rope is heavy enough for a sign painter's use. Two hundred feet of rope will give a tackle 50 feet long, which is sufficient for general use. This may be lengthened temporarily to about 62 feet by tying on a 50-foot rope. To firmly secure the upper block, a large hook may be used without detriment to a building, as shown in Fig. 39. This hook is usually made of round iron from $1\frac{1}{4}$ inches to $1\frac{1}{2}$ inches thick. A rope with strongly spliced loops at the ends is passed through the ring end of the hook, and both loops are caught in the hook of the tackle block. A plank is often used on flat roofs, where an iron hook might not be considered safe. In such cases heavy weights (flat stones, for example) are placed on the end of the plank, the opposite end being projected several inches beyond the edge of the roof; the spliced rope is carried double around the end of the plank.

Fig. 39

The double tackle block is always fastened at the top; the lower single block is connected to the ladder by means of two slings, one at each end of the ladder. These are fastened

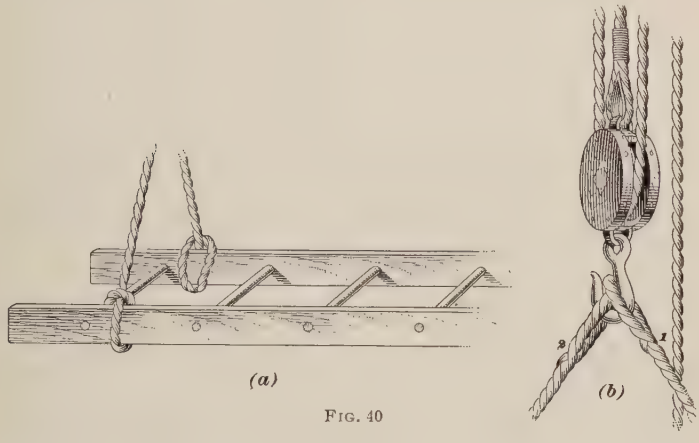


Fig. 40

to the ladder inside the end rungs, as shown in Fig. 40 (*a*). View (*b*) shows how the ends should be fastened to the hook of tackle block. Rope *1* should be hooked on first and carried to the top of the hook, allowing rope *2* to be hooked on and dropped underneath it. This does away with all possibility of one of these ropes slipping off the hook, *1* holding *2* firmly in place. Before hooking the ropes on to the tackle, however, see that the four strands of rope are entirely free and hang parallel. The swinging stage is now ready to be hoisted in position. Two are needed to operate a swinging stage.

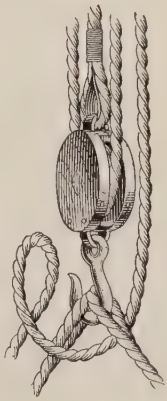


Fig. 41

It is necessary that both should understand the method of fastening the loose rope before beginning to ascend; else a serious accident may result. In Fig. 41 is shown the proper method for securing this rope. After passing it underneath the slings it is brought up and twisted so that the weight only tends to bind on the twisted portion of the rope when attached to the hook,

thereby making it entirely impossible for the staging to slip or for the rope to slip from the hook. In releasing this fastening, pull down on the free strand with the right hand and detach the loop with the left.

SHEET-IRON SIGNS

98. Ornamental Ironwork.—A certain high standard of art has characterized ornamental ironwork in all ages, perhaps from Tubal-cain, the first artificer in iron, down to the present age. Iron has been used in connection with hanging signs for many centuries, but never has the art reached so high a degree of excellence as at the present

Fig. 42

time. The ornamental crane, for instance, from which a sign is suspended presents an excellent opportunity for the skill of the ironworker.

99. Sheet-Iron Transparencies.—In Fig. 42 is shown a design for an ornamental sheet-iron transparency that will serve to illustrate the general construction and utility of this

Fig. 43

style of sign. The ornamental crane is usually made of bar iron 1 inch square placed perpendicular to a piece of flat iron, in which holes are drilled and strong coach screws inserted to fasten the work firmly to the building. At least three screws should be used below and four above the ornamental portion of the crane. The ornamental work consists of graceful curves with centerpieces of machine- or hand-made rosettes. The sign is constructed as follows: The sides on which the lettering shows are of thin galvanized iron. The letters are cut out with cold chisels. When the box-shaped sign is fastened together, a framework of wood is closely fitted within it, and in the sides of this opal glass is set. This gives the letters a solid white appearance in daylight, while at night electric lights within the sign render the lettering translucent. A sliding door in the bottom or back of the sign gives access to the lights. The frame, as well as the crane, is painted a jet black, in imitation of the Venetian lamp, drying without gloss.

Fig. 44

This style of sign is often supported on an ornamental post, as shown in Fig. 43, or it may be projected from the building with ornamental ironwork, as shown in Fig. 44. In the latter case, it is necessary to drill holes in the brickwork and solder the ornamental work substantially to the building.

HANGING THE SIGN

100. Points to be Observed.—The value of a sign depends on its finished appearance when placed in position outside or inside a building, and the sign painter should not allow his artistic taste or ability to cease with the production of a piece of work that may prove his skill; he should study the relation of his sign to its surroundings, and arrange its final fastenings accordingly. These should, first of all, be the securest possible, and be capable of resisting the severest windstorms; but they may be attached without impairing the legibility of the sign or marring its neatness. Therefore, in hanging signs, do not allow the work or fastenings used to show more than is absolutely necessary, unless they are of an ornamental nature. Architectural ironwork is used for swinging signs, either in the form of an ornamental crane or of scrollwork conforming to some characteristic design, such as a heraldic shield or panel.

101. Tools Necessary for Sign Hanging.—Among a sign hanger's requirements are two or three ropes about $\frac{3}{4}$ inch thick and 60 feet long, and two small hemp clothes lines. The large ropes are used to hoist the sign into position, and the small ones are sometimes used for guys, to keep the sign away from frail trimmings on the building or from other projecting signs. Large screw eyes are used for attaching ropes to a sign when rope cannot be passed around it. These are screwed into the top edge of the sign. A brace and bit is used to bore holes through the band into the sign board, and the large screw eyes are then adjusted. These screw eyes are made of $\frac{1}{2}$-inch iron with a large thread that will hold a heavy sign without danger of pulling out. To drill holes for hooks, a sledge hammer and long-handled tongs are used, the latter being made so as to firmly hold the hook in place.

General tools, such as are found in a well-equipped sign shop, are also used under various circumstances in sign hanging. A list of these useful tools is given.

Saw and miter-box
Saws for miscellaneous work
Claw hammer
Tack hammer
Chisels ($\frac{1}{4}$-inch to $1\frac{1}{2}$-inch)
Cold chisels (for cutting into brick walls)
Tin snips
Pliers
Owls, files, and wood rasps
Iron clamps (No. 12)
Monkeywrench
Pipe wrench
Iron square
Screwdrivers
Brace and bits
Bench vise
Punch and eyelet set
Jack-plane
Iron-block plane
Spirit level
Oilstone
Oil can
Rules
Tape line

IRONWORK FOR SIGNS

102. Forged Irons and Stock Hardware.—The ironwork necessary in sign hanging consists of forged irons and stock hardware. Of the former, braces and supports of all kinds are constructed to fill immediate requirements. Ornamental ironwork that requires much forging is necessarily quite expensive, and its use is therefore restricted to the most elaborate styles of signs. To lessen the expense of forging, machine-made rosettes are used, and these greatly add to the appearance of a wrought-iron design.

Fig. 45

Braces and supports are made by any blacksmith. They are made of round-iron rods, from $\frac{3}{16}$ inch to $\frac{3}{4}$ inch in diameter. The latter is heavy enough to hold the weight of the heaviest signs. Square rods are used for cranes and supports, especially where other irons are joined with these. Sign hooks are always kept on hand by a sign painter. They are also made by any blacksmith, and are of two lengths, 7 inches and 9 inches, of $\frac{5}{8}$-inch and $\frac{3}{4}$-inch iron, respectively.

The shape of a sign hook is shown in Fig. 45. The end is flattened to a chisel shape, which enables the sign hanger to drive a hook into a hole that has been plugged with wood and keep the end of the hook vertical. The hook end is

usually about $1\frac{1}{4}$ inches long. Awning hooks are used when a smaller size than the 7-inch hook is required. These, although of wrought iron, are obtained at any hardware store. They come in two or three sizes, and are used especially for signs having no band.

Ordinary strap-iron hinges are used for sidewalk signs or for **V**-shaped signs that project from the fronts of buildings; these may be had ready made.

Clothes-line hooks are often convenient for hanging signs. These come in but one size.

Coach screws or machine bolts are also used in sign hanging. These are of all sizes and, having a square head, may be put in place with a monkeywrench.

Screw eyes (of polished iron) are of all sizes from $1\frac{1}{2}$ inches to $\frac{1}{4}$ inch. A sign painter always keeps a large assortment of these on hand. Wrought-iron screw eyes of large size may also be purchased of a hardware dealer.

BANNERS

COMMERCIAL BANNERS

103. Materials Used.—There are many kinds of cloth banners, made to serve all purposes, from the mammoth side-show pictorial banner to the auctioneer's flag. When the banner is used as a permanent sign, it is necessary to make it of some strong material that will withstand wind and moisture. There is nothing better for this purpose than cotton duck. The kind known as **8-ounce cotton duck** is the kind generally used by sign painters. Heavy **cotton drilling** comes next to duck in durability. Temporary cloth banners are made of unbleached and white **cotton sheeting;** the unbleached is the more durable, but the white has a much better surface on which to letter. **Colored cloth** is used for banners, and may be had in duck, cotton, or woolen bunting. Other and cheaper materials also are used, such as glazed cambric.

104. Making the Banner.—In order that a cloth banner may not tear or fray at the edges, these should be hemmed by lapping them over about 1 inch. It is not necessary to do this with selvage edges, unless the banner is unusually large. To suspend the banner, large eyelets, called *grommets*, are firmly set in the edge of the cloth, through which a rope or wire is passed. Light-weight cloth banners are more liable to tear, as these have to resist the same wind pressure as banners made of stronger material. It is necessary, therefore, to pass a rope through the hemmed edges, looping and knotting this at the corners. A rope of the size generally used for clothes line is large enough for this purpose.

105. Painting Cloth Banners.—A cloth painted with lead and oil, or with colors mixed with oil or varnish, will be stiff and unserviceable when the paint has dried. It is necessary, therefore, to use some ingredient in the paint that will render the cloth flexible. Several things will give this result; namely, common soap, beeswax, and glycerine. But nothing, perhaps, is cheaper and more satisfactory than ordinary brown soap. This should be melted and added to the paint in the proportion of 1 pint of melted soap to 2 gallons of paint.

To size the cloth, which should be done before any paint has been applied, use common glue dissolved in hot water, putting about $\frac{1}{2}$ pound in one pailful of water, and adding 3 ounces of glycerine. Stir well, and then thoroughly brush over the surface of the cloth with this size. If beeswax is used instead of soap, melt and mix one part of it with three parts of paint. After the cloth is painted, the lettering may be done with paint mixed in the regular manner. Great care should be used in melting these materials.

106. Lettering on Cloth.—White cotton duck and white cotton sheeting may be lettered while the cloth is dry, or they may be dampened first with water. In the latter case, almost any of the colors that naturally accumulate in a sign painter's shop may be used, and which it is a matter of economy for the sign painter to use up. But in

lettering dry cloth, only one mixture may be used; this is made as follows: Mix the best lampblack thoroughly with a cheap grade of furniture varnish; thin with naphtha until the black is reduced almost to the consistency of water; then apply with a flat camel's-hair brush about 1 inch wide. This is the most convenient brush to use, as many of the letters may be made with a single stroke of this brush. Also, with this brush almost free from black or color, ornaments may be made with great rapidity that appear to be the result of close study. For cotton duck, a soft bristle brush is used, of a size most suitable to the size of letter required. Beginners, however, sometimes make the mistake of choosing a brush too large for the work in hand; better and cleaner work may be accomplished with a brush too small than with one too large.

POLITICAL BANNERS AND TRANSPARENCIES

107. Street Banners.—Once in 4 years, the attention of the sign painter is called to political banner making. In many states, the demand is rendered more frequent by an enthusiastic interest in gubernatorial elections. Some political banners bring as much as $300, and for this reason there is usually great competition among local sign painters to secure as many orders for banners as possible, the competition being rendered somewhat keener by the shortness of the season during which they are in demand. The nets may be purchased ready made, in all sizes up to 30 ft. × 40 ft. There are firms, also, that furnish oil-color portraits of candidates on sheeting and duck, and in all sizes. Very few sign painters, however, are satisfied to prepare a banner with stock portraits, preferring, rather, to do the entire work, purchasing only the net.

The work is accomplished as follows: First, make a scale design, which is more effectual than photographs in securing orders. Then, in a room having sufficient wall space, stretch the cloth on which the work is to be done. Cotton drilling will be found to be heavy enough for all purposes. In many instances unbleached cotton sheeting is used. The

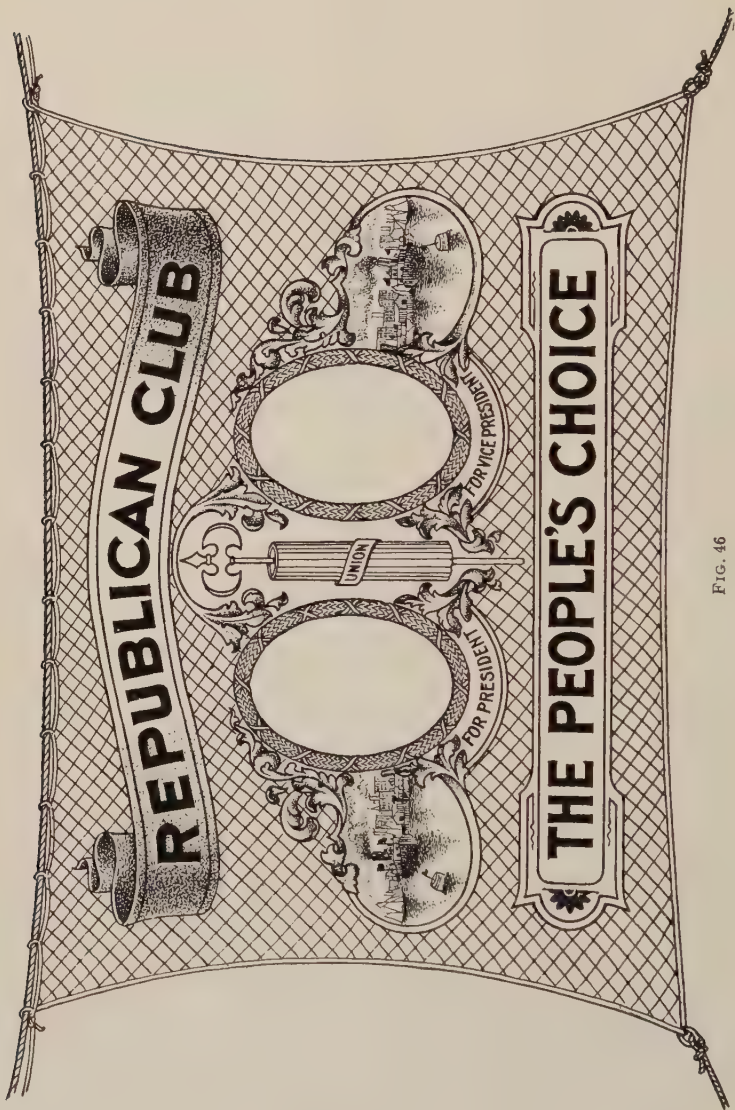

REPUBLICAN CLUB
UNION
FOR VICE PRESIDENT
FOR PRESIDENT
THE PEOPLE'S CHOICE

FIG. 46

design is duplicated, as all banners show from opposite directions. It is necessary, therefore, to cut out the different parts of the design and make them fit accurately when placed back to back. In Fig. 46 is shown a banner with a ribbon and panel, on which the lettering is placed; the center piece containing the vignettes is also shown. In painting and lettering a banner, the sign painter should avoid the use of too much white lead, as this makes the banner heavy and causes it to sag in the center. To attach the designs to the net, one set is laid face downwards, and the net placed over it. The next set is then placed on top, face upwards, bringing both sets back to back, with the net between. The edges are then sewed together, securing them to the strands of the nets.

108. Hanging the Banner.—A $\frac{3}{4}$-inch Manila or hemp rope should be extended between opposite points on the street and securely fastened. Before fastening one end permanently, the banner should be slid on to this rope, iron rings having been fastened to the top of the banner. To the outside rings at the top corners small ropes should be firmly attached, and carried through a pulley at each end. These ropes should be about $\frac{3}{8}$ inch, or about clothes-line size. The object of operating the banner with pulleys is that it may readily be brought in against the building and fastened during a violent wind storm. A guy rope should be fastened at each of the lower corners, and these should be fastened at the angle shown in Fig. 46. This will hold the banner firmly and prevent the wind from whipping out the corners.

109. Club Transparencies.—For club rooms, wigwams, and headquarters for various political organizations, a sign painter prepares all kinds of cloth transparencies. Many of these contain the portraits of candidates, painted so as to be distinguished at night as well as in the daytime. These signs are built by making three frames of 3-inch strips $\frac{7}{8}$ inch thick, covering them with bleached cotton sheeting. They are then fastened together, and a solid top

and bottom fitted, leaving the end next to the building open. Fig. 47 shows one form of transparency used. In this design the heads of the candidates are large, and the lettering is confined to the middle section. In some cases, the portraits are placed together on the middle section, and the lettering duplicated on the sides. Transparencies are usually lettered in red, blue, and black. English vermilion is used for the red, Prussian blue tempered with white for the blue, and best refined lampblack for the black lettering.

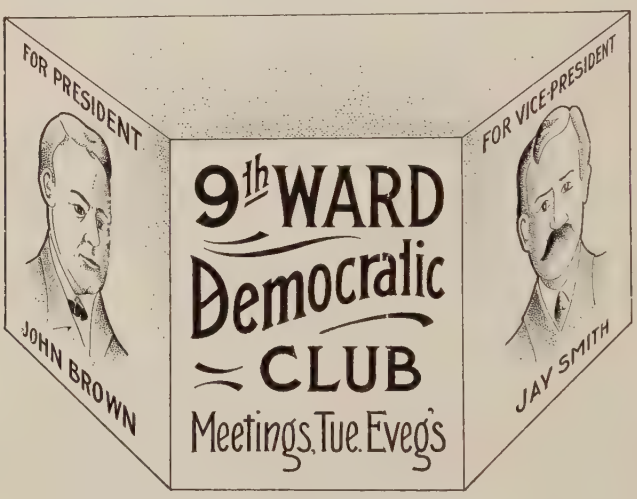


Fig. 47

110. Transparent portraits are painted with opaque color, but this is scumbled on the surface of the cloth in such small quantities that, with a strong light at the back of the cloth, every tint and deep shadow is plainly seen. The color used for this purpose is prepared by mixing burnt sienna and ivory black, combining these in such proportions as to produce a rich reddish brown. This color is in close imitation of that produced in printing a photograph.

111. Painting the Portrait.—After carefully sketching the outlines by enlarging the photograph, as explained under the heading, Enlarging and Reducing Designs, begin

by rubbing in (i. e., scumbling) the lightest tints of the face with a large stiff sash-tool brush. The brush should be almost free from color. A little of the color should be taken up on the end of the brush and thoroughly rubbed on a clean space on the palette until no appreciable amount of color remains on the brush. The brush may then be applied with safety to the cloth. There is a tendency among novices in scumbling to tone a head several shades darker than it should be. Always avoid this by keeping the first portrait too light rather than too dark. Even the deepest shadows should be made by adding color cautiously. Do not attempt to secure the necessary strength with the first application of color, but work over it several times, always rubbing in the color, never laying it on. The details of the face should be made with small bristle brushes, flat preferred. After the head and drapery are finished, rub in a clouded background lightly above the shoulders, and especially on the light side of the portrait.

Hatching is sometimes used for backgrounds, that is, the brush marks are crossed, making them distinct but not dark in color, in contradistinction to blending.

SOCIETY BANNERS

112. Purpose and Composition.—A society banner is prepared chiefly as an ensign to be carried by an organization on parade or drill. While the work is usually seen at a distance, yet there is no work within the province of the sign painter that calls for so accurate, careful, and artistic workmanship as the design on a society banner. Many societies are willing to pay as much as $500 for such ensigns, and they must therefore show a richness commensurate with such a valuation, both in material and in the handiwork of the sign artist. The more elaborate banners are often enclosed in glass cases and kept on exhibition at headquarters. The most expensive banners are made of extra-heavy twilled or grosgrain silk, woven with a smooth surface; this material is known as *banner silk*. There are also heavy satins that are

just as desirable as silk, being both durable and rich in appearance.

113. Banner Designs.—The simplest design used for a banner is the large, square or rectangular shape, with a single-color field, shown in Fig. 48. These banners are sometimes 8 feet in length and 5 in height, requiring four

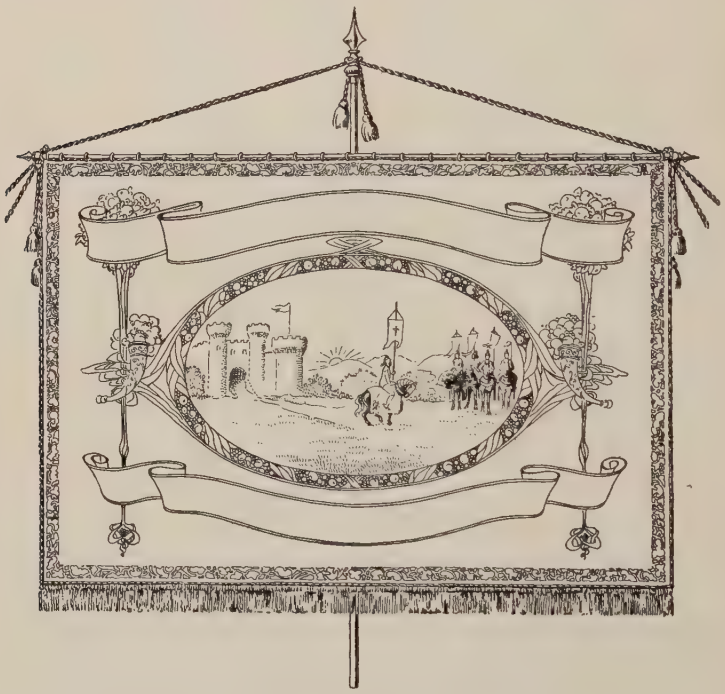


FIG. 48

men with ribbon guys, besides the standard bearer, to steady them. A large banner is not the most desirable ensign to carry, and often, in a strong wind, the attempt to do so is abandoned, much to the comfort of the standard bearer. Often, the banner is made greater in width than in height in order to permit of an emblem that is more suited to this form than to the vertical panel form. The general and most popular form is one whose dimensions are from

3 feet to 3 feet 6 inches in width, and from 4 feet to 6 feet in height. The regular width of banner silk is 21 inches, although extreme widths may be had from large silk dealers. In order that the silk may be used with economy, the sign painter usually designs a banner that will utilize the silk to the best advantage and effect the greatest economy in stock. To do this he often makes the center of the banner the full width of the silk, allowing for the seam, and widens it to the required size by adding side-pieces of another color. If these were 10 inches wide there would be no waste of material. In Fig. 49 is shown a plain style of banner without the side-pieces attached, but having a *hood*, which greatly adds to the artistic appearance of a banner. There are no arbitrary rules that govern the selection of colors for banners. A few hints along this line, perhaps, will be of great assistance to one that has never undertaken the preparation of a banner. In selecting the colors and the design for a banner, the entire inscription must first be considered, and if this contains an important word in the form of a name, or a motto, the hood may be used to advantage. If the reading matter is such that equal amounts of the less important wording may be placed on the side-pieces, these may be used to advantage. When the inscription is confined entirely to the center panel

FIG. 49

and hood, a floral piece or an ornament may be placed on the side-pieces that will greatly enrich the banner.

A white center with pale yellow sides harmonizes well with a deep blue hood. A maroon hood may be used with cream yellow, light blue, and pink. Purple may be used for a hood, in which case it is advisable to combine this with white and cream yellow. The back of a banner may correspond with the face, if this is to be elaborately lettered, or it may be made of some cheaper material than that used for the face. The hood should never be placed on the back of a banner.

114. Guidons.—Guidons are intended to float with the breeze, and for this reason they are made of one thickness of light-weight silk. The face usually bears one or two letters or a monogram. The reverse side must therefore be lettered backward and finished to correspond with the face, for the reason that the lettering invariably shows plainly on the other side if this is not done. Fig. 50 shows the general design used for a guidon. The regulation size of the guidon is 21 inches in length and 15 inches wide next the pole. The distance between the points is 6 inches. Two colors are often used, in which case they run horizontally, the seam being at *a a*. The price of guidons varies according to trimmings and lettering, and ranges from $5 to $10 a pair.

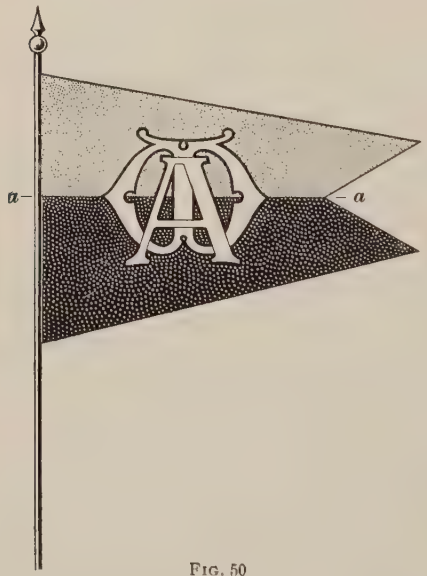


Fig. 50

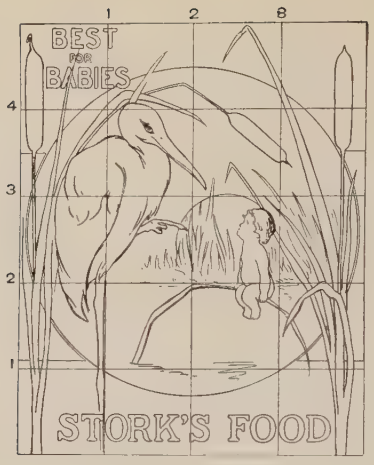
115. Trimming and Making a Banner.—The sign painter usually provides all trimmings for the banner, with

the exception of thread, etc. The best banner makers are those who are expert in fancy needlework or art embroidery. It often occurs that their skill in this line is also required on the inscription of a banner. Embroidered letters are often preferred by a customer to gilded or silvered letters, and it is essential, therefore, that skilled and trustworthy needle workers be employed. The sewing work on a banner usually costs $5, which includes the material used for lining. The cost of embroidery varies, according to the inscription and size of letters, from $5 to $75. The trimmings and attachments of a banner consist of bullion fringe that entirely surrounds the banner, bullion tape that is placed on the edges, and bullion cord that reaches from the top of the pole to the ends of the cross-pole and hangs at either side of the banner. To the ends of this cord, and at the points of the banner, bullion tassels are fastened.

The pole is usually a jointed pole, ornamented at the head with a gold-plated eagle. The cross-pole is of the same wood as the vertical pole (cherry, walnut, or ash), and terminates at each end with a suitable ball or spear head. A strong screw hook is fastened in the vertical pole, and a screw eye in the cross-pole that carries the weight of the banner, though the weight apparently falls on the bullion cord. The banner is fastened to the cross-pole by means of silk tape or burnished brass rings that are firmly sewed to the top of the banner. The tape or rings are slid over the pole before the ornaments have been screwed in the ends of the cross-pole, thus completing the banner.

ENLARGING AND REDUCING DESIGNS

116. The letterer is often given a design, trade mark, or signature that he is required to reproduce; or, during campaign seasons, he is often called on to reproduce heads of candidates from small engravings or photographs. It is necessary therefore to adopt some method that will faithfully reproduce the copy provided and render it accurately in any size. For campaign work, the polyopticon is used; by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8
4
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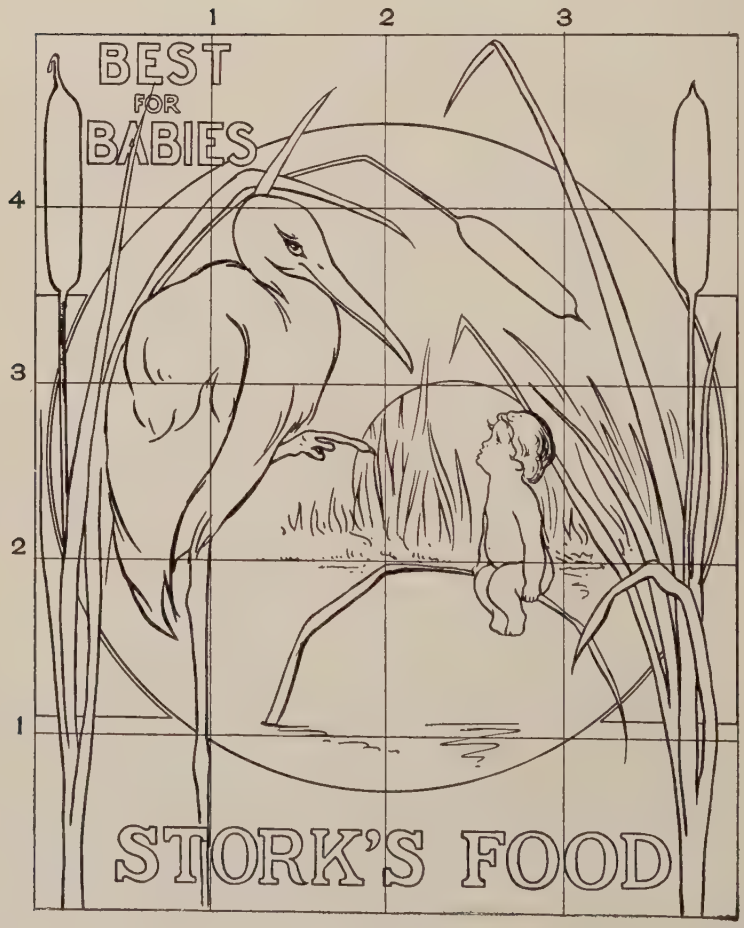
1
BEST
FOR
BABIES
STORK'S FOOD


1
2
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2
1
BEST
FOR
BABIES
STORK'S FOOD

FIG. 51

reflection, using a strong artificial light, the photograph is thrown directly on the cloth, and is then traced on it with a lead pencil or crayon. There are mechanical devices arranged with a system of adjustable angles, at one end of which is a tracing stylus, and at the other a lead pencil. While the operator is following the lines of the copy with the stylus, the pencil is automatically producing the drawing in the size required. Another process is that known as the *cross-section* method, by which the copy is divided into a number of equal squares, and the space to be occupied by the enlarged drawing is divided into a corresponding number of squares. Thus, numbering the vertical and horizontal lines, the part of the copy occupying a certain square is drawn separately in its corresponding square. When this process is completed, the entire design will be found to be accurately reproduced in every detail. In Fig. 51 are shown two designs, the larger of which is enlarged to four times that of the smaller one. There is, however, no limit to the degree of enlargement or reduction of the design. It is not necessary that the same proportion should be observed in the reproduction outside of the main body of the design, as additional margin may be allowed or the margin of the copy may be cut off from the enlarged drawing to suit the requirements. In this case the sign painter adds to or continues the design on the margin.

CHARGES FOR SIGNS AND LETTERING

117. Estimating Cost of Work.—Prices for sign painting and lettering vary in different localities, therefore an arbitrary schedule of prices cannot be given that will be strictly in harmony with those asked by sign painters generally. For all small signs and for lettering the sign painter endeavors to establish a certain price that may be readily named to a customer; but for all large signs and various sign contracts, he is given the privilege of deliberately considering the work in question; after carefully estimating the cost and allowing for a fair profit on the work, he submits

his proposal in writing, either sealed or open (the former preferred), and awaits the pleasure of his prospective customer. A sketch of the work usually accompanies the estimate; and when this is carefully and artistically prepared, the bidder's chances of securing the work are greatly increased, all other points, such as his reliability and the relation of his estimate to those of others, being taken into consideration.

118. How to Succeed in Securing Work.—Every sign painter, whether he has had long experience or is somewhat of a novice in business matters, can safely adopt the following method: Set a fair price on your workman's time per day, or on your own, if you are to do the work. To this add the cost of materials that will be used in the work and include all incidental expenses. Then add what you would consider to be a fair profit on the work. In doing this it is always well to secure a special price from your sign carpenter, as well as from your blacksmith, as the prices of board signs and forged irons cannot be fairly approximated under all circumstances. With experience, a sign painter is able to estimate very closely with his competitors, until it becomes a matter of his securing either his painting materials or his sign boards cheaper than his competitor. His ability to accomplish the work better or quicker must also be considered, as this would give him better chances of success in securing the contract. The sign painter who takes advantage of all cash discounts in buying and adds every economic facility to his shop is usually the man who is successful in securing work.

119. Special Prices.—There are many classes of work on which, to a considerable extent, fixed prices are set, which vary but slightly throughout the country. The following is an endeavor to specify, as far as possible, all classes of work on which charges are comparatively uniform. It is based on charges made by many of our leading sign painters.

120. Brass Signs.—Brass or white-metal plates containing 5 or more square feet, and not exceeding four lines of

lettering, $2.50 per square foot. For smaller plates or for an excessive amount of lettering, a special price must be given. Trimmings for brass or white-metal plates are always extra.

121. Glass Signs.—An arbitrary price on glass signs could not be fixed on account of the variety of work of the size of glass, the expense of frames, etc. But the sign painter has overcome this somewhat, in regard to advertising glass signs, by furnishing a well-framed glass sign with a gilded design, highly illuminated with colors, size about 22 in. × 28 in. for $1 each, in lots of not less than 100 signs.

122. Plain Black Lettering.—Door lettering in office buildings holds an important place in the employment of the sign painter. A fixed price of 50 cents per line is charged for one or a dozen lines of letters. Marble tablets are sometimes used in the older buildings, and are likewise lettered in black; the price charged for this is 50 cents per space.

123. Gold and Silver Lettering on Glass.—The price usually charged for plain gold lettering on glass with a black shade, letters about 5 inches or 6 inches high, is 75 cents per lineal foot; with colored shading added, $1 per lineal foot. For less than 10 feet, a special price is given. For plain silver lettering, 50 cents per foot is charged; and 75 cents per foot if with black, or with black and colored, shading. Fancy gold lettering brings from $1 to $2 per foot, according to the amount of work involved.

Gold house numbers on residences cost $3 each. If several numbers are put on at the same time a special price is given, according to the amount of work.

124. Board Signs.—For a plain painted board 2 ft. × 15 ft., letters cut in on a black smalted ground, 75 cents per lineal foot; with gold lettering, $1 per lineal foot; with relief letters, plain beveled edges, $1.50; with full rounded relief letters, $2 per foot.

125. Japanned-Iron Signs.—Japanned-iron plates 10 in. × 14 in., with two or three lines of letters in gold

$1.50; 12 in. × 17 in., $2; 14 in. × 20 in., $2.50; 18 in. × 24 in., $3.50; 24 in. × 36 in., from $5 up, according to amount of lettering. Substituting aluminum for gold leaf, a uniform reduction of 50 cents is made on the above prices. Japanned-tin or iron house numbers, 25 cents each.

126. Cloth Signs.—Common bleached sheeting 3 ft. × 18 ft., lettered in plain black or red with two or three lines of letters, brings $3.50. Frame, $1 extra. This price includes hanging. Colored and shaded letters bring $1.50 extra. Cloth signs 6 ft. × 18 ft., 1-yard widths being sewed together, $5; if double-width cloth is used, $6. This includes several lines of letters in red and black. With frame, $1.50 extra.

127. Show-Cards.—Full-sized show-cards, 22 in. × 28 in., with three or four lines of letters in black or white, 50 cents each; if colored or shaded, 75 cents each; half cards, 14 in. × 22 in., with two or three lines of letters, 35 cents each; quarter cards, 11 in. × 14 in., 25 cents each. Price tickets, 50 cents to $2 per dozen. Manila window announcements in black and red, 6 ft. × 8 ft. or 10 ft., with several lines of letters, $2.50.

128. Wall Lettering.—For lettering on a dead wall where a swing stage is required, a sign painter usually charges 8 cents per square foot for special jobs. This is for a black ground with a white letter (one coat of black and two coats of white lead). Coloring and shading costs 2 cents per square foot extra. For advertising work, where large contracts are made, the price is 3 cents for plain work and 5 cents for color work. The latter includes pictorial or other fancy designs.

129. Wire Signs.—Roof signs 6 feet high by 50 feet long, including painting of frame and wire, wood or metal letters 3 feet high, braces and other attachments, set up complete, 25 cents per square foot. Wire banners, 4 ft. × 6 ft., with ribbon and panel design painted on both sides, projected by pole with gilded acorn or ball, gold or aluminum letters, $25.

130. Sidewalk Signs.—The standard price for a double sign to set on the outside edge of a sidewalk, 2 feet wide by 5 feet high, fastened together at top with strap hinges, painted and lettered complete, $8. If gold or aluminum is used for lettering, an additional price is charged.

131. Stair Signs.—Zinc or thin wood strips fastened to the risers of stairs bring from 75 cents to $1 each, according to groundwork and style of letter.

132. Window Lettering.—Painted letters on store windows are charged as follows: Two coats of white or gold color with shading of black, red, and blue, $2.50 per line.

133. Frosting on Glass.—For frosting office doors or interior window panes, 75 cents each. For removing old frosting, 50 cents each. The removal of old lettering on office doors is seldom charged for if it is done by the sign painter who is commissioned to reletter the door.

134. Stenciled Advertising Signs.—The stenciled sign known among sign painters as the **fence sign** is of two sizes, 1 ft. × 5 ft., and 6 in. × 36 in. The price made on the former in lots of 500 is $25 per hundred; on the latter it is $18 per hundred. This price does not include putting up.

135. Special Contracts.—Many sign painters have special contracts with trunk dealers and with dry-goods and other houses, with whom a fixed price is established for marking trunks, umbrellas, etc.; this price is often set at 25 cents per article marked. This would not be profitable to the sign painter were it not for the fact that several pieces are usually marked at the same time, and that many of the articles receive but two or three letters.

PRACTICAL DESIGN AND ORNAMENT

INTRODUCTION

1. Value of Artistic Designs.—Every first-class letterer or sign painter attaches great value to his collection of designs, and every workman, especially in the art branches of industry, should possess a well-filled scrap book of examples of the best work done in his particular line. These are most helpful to him when preparing original designs. Suggestions for novelties in artistic production often spring from a review of the work that has been accomplished by others.

For the benefit of those who may not be able to discern clearly the line of propriety in the use of the work or thought of another, it may be said that no reputable designer or sign painter will ever copy entire any design or parts of a design wherein the personality of the originator is expressed. The plagiarist is held in contempt among workmen, artists, authors, and composers, and it should, therefore, be the aim of every beginner to rise above the level of the plagiarist and create or originate ideas that will mark his work as new. The man with original ideas is always in demand. It may be asked: Of what use is a collection of designs made by others? In answer to this, it may be said that a designer has the privilege of deriving his ideas from the work of others and applying them in another form, or of improving on the original design. Again, there are very many designs extant to which no one can lay claim, such designs having become

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common property. The designer, therefore, knows or should know intuitively the designs he may use from those he may not use intact.

In preparing the following pages, there have been gathered together a large collection of photographs of original and artistic signs and lettering, taken in various large cities in America. These reproductions give the student the advantage of observing the work of the leading sign painters. Many of the designs are examined in detail, and the methods of producing them shown in a way that should prove of the greatest assistance to the student. Many suggestions, also, are offered that should be most helpful to one engaged in preparing designs similar to those shown. By carefully studying these illustrations, the student will be enabled to understand many important points of practical value to a sign painter, in regard to the proper location of signs on buildings and the best methods of attaching them.

2. Examples of Ornament.—The need for ornamental work is felt by every letterer and sign painter, and practical applications of the various kinds of ornamentation are brought to the attention of the student in the photographic illustrations. Aside from these, however, the subject of ornament has been given special treatment, and the character and composition of ornaments used in general practice have been shown. Thus, with a knowledge of letter formation, sign and banner construction, and ornamental design, and with examples of the best work done by others, the student should possess a good understanding of the subject of lettering and sign painting, and should be prepared to contract for and execute any class of work coming within the province of the letterer and sign painter.

APPLIED DESIGN

METAL SIGNS

3. Plain Metal Signs.—The plainest brass or white-metal plate that can be made is produced from No. 16 sheet metal (U. S. standard gauge), and is $\frac{1}{16}$ inch thick. The inscription is etched to a depth of about $\frac{1}{32}$ inch. The letters are then filled, and the plate is ready to be attached to the building or space for which it was designed, holes being drilled through the plate and ordinary brass or silver-plated screws being used. A step toward the ornamental would be to mount this plain sign on a board $\frac{7}{8}$ inch thick, the edge of which has been given a wide bevel and the bevel coated with an ebony or varnish-black finish. In place of the ordinary screws, heavy plain or ornamental screws may be substituted, one in each corner of the sign. The heads of some of these screws are in the form of rosettes and are quite elaborate.

Fig. 1

4. In Fig. 1 is shown a brass plate bent slightly to fit on a pilaster at either side of an entrance to a commercial building. The sign is mounted on a solid board back by means of ears soldered or brazed on the back of the plate. Brass rods with ball tops are used on both sides to give finish to the sign. These rods are attached with brass screws.

5. Beveled Metal Signs.—The next step in the order of progression toward the ornamental is the beveling of metal plates to give them the appearance of great thickness. The corners of the plate are first cut as shown in Fig. 2, and on the back of the plate a triangular groove is scored with a graver along the dotted lines shown in the same figure. The metal is then easily bent until the corners are closed; these are then brazed together, giving a finished sign as shown in Fig. 3.

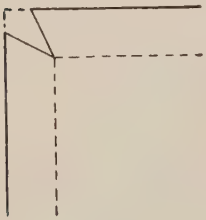


Fig. 2

To place this sign in position, it is necessary to have a beveled board made to fit the inside of the sign. This should be securely fastened to the building, after which the metal plate is attached by means of ornamental screws, one in each corner. The illustration chosen, being a highly burnished brass plate, unavoidably shows strong halation in the photograph, giving it the appearance of an oxidized sign. The attention of the student is also called to the departure from regular treatment in outlining the letters instead of making them solid black.

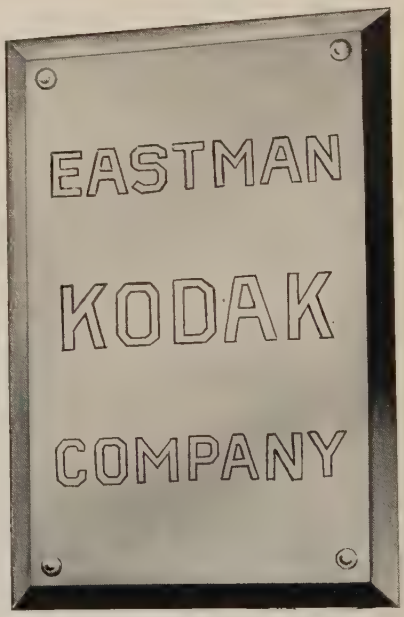


Fig. 3

6. Beveled Border Metal Plates.—The heavy beveled border is a great addition to the appearance of the metal sign. Strips of heavy metal are brazed together to form a frame for the plate on which the letters are placed. In Fig. 4 is shown a brass plate with a

heavy border, the inner edge of the border being beveled at an angle of 45°. These signs may be mounted on a board, or they may be placed directly on the building, on either brick, stone, or iron, by drilling holes and plugging them with wood; after which they may be firmly attached with screws.

7. Metal Relief Letters.—In both Figs. 4 and 5 are shown **metal relief letters.** These letters are cast from wooden letters and dressed and burnished. Before they are fastened to the plate, they are exactly arranged in the positions they are to occupy and whiting or rouge is dusted on the surface around them. They are then removed and two

Fig. 4

small holes, not more than $\frac{1}{8}$ inch in diameter, are drilled through each letter. The letter being held in position, a drop of solder is dropped into each hole and the letter is firmly attached. The letters are also attached by means of screws. Many sign painters make the mistake of placing large, inartistic letters on metal signs. Fig. 5 presents such an example. Not only are the letters too large, but their arrangement is not good: it would be in better taste were they placed on horizontal lines.

8. Metal Drum Signs.—The bending and shaping of metal signs calls for heavy machines with wide cylinders.

As the sign shop is not usually equipped with such machines, the metal worker is sought out and the metal plate is bent to the required curve before it is buffed. As shown in Fig. 6, the drum sign also is finished with a heavy metal border. The top and bottom sections of this must likewise be bent to fit the plate.

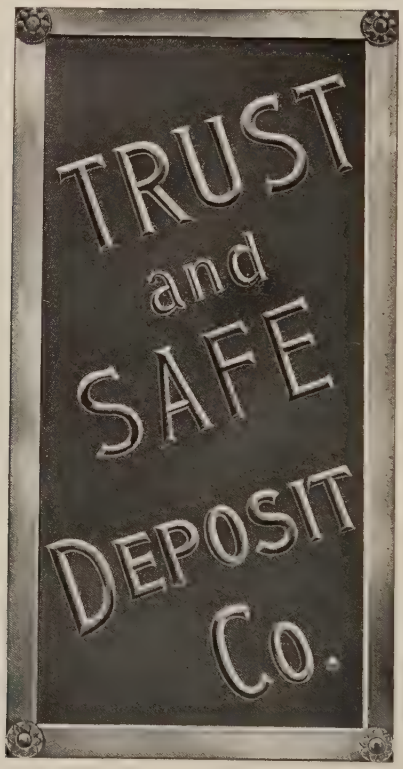


Fig. 5

In preparing the wooden letters for casting, the curve of the plate should be given to the patterns. The letters used on curved surfaces are usually made narrower than letters that are to be placed on a flat surface. Unless such signs are perfectly rigid when bent, it is well to mount them on a frame made to fit the inside of the sign.

9. Novel Metal Signs.—The drum sign shown in Fig. 7 is something of a novelty. This sign was of sheet zinc, copper plated. The letters also were copper plated, as well as the chain and rosettes. There are unlimited opportunities for the sign painter and metal worker to prepare metal signs along original and novel lines. A few such novelties will be considered in the following articles; these being of a typical character, they will be found most helpful as material from which to build and elaborate when artistic designs are required.

Fig. 6

10. Ornamental Borders.—Ornamental borders and centerpieces are cast from wooden patterns or from other metal designs. Trade marks, coats of arms, or bas-relief designs of any description may be placed in the center or at the top of the sign, and the lettering made to harmonize in general character with such ornamental feature. In Fig. 8 is shown a brass plate with a relief-scroll border and raised letters. In signs with an ornamental border, the edge may be left perfectly plain, the result being, instead of detrimental, an improvement in the appearance of the sign. In

the illustration, however, the sign painter has finished the edge with a half-round brass molding. If the ornament, such as that used on the sign shown in Fig. 8, is placed on a rounded surface, it must be bent to the surface of the sign.

Fig. 7

11. Projected Metal Plates. One of the richest effects in the treatment of the metal sign is shown in Fig. 9. The brass plate used was of No. 16 sheet brass with rounded ends. The edge of the plate was beveled and the plate highly burnished. On each end was a light relief ornament. The letters were cast in brass and beveled. The centers of the letters were left open when cast, and were filled with black after they were attached. The plate was projected from its background about 2 inches by being set on lion's paws (cast in brass), one at each end of the plate. The board on which the sign was mounted was of mahogany, which greatly added to the richness of the sign.

12. Ornamental Brass Signs.—In Fig. 10 is shown a brass plate that is itself cut to a design. The design is first marked on the plate, and then cut out with cold chisels, after which it is filed to a perfect edge. The letters of this sign are raised and are of cast brass with a polished surface. The brass plate also is burnished. As can be seen in the illustration, the sign cannot be cleaned or polished easily, and for this reason such signs often show neglect about the inner edges of the letters. This

fact detracts somewhat from the value of this style of brass sign.

Ornamental designs are often etched on burnished brass plates with nitric acid. Fig. 11 shows a sign, perhaps 3 ft. × 5½ ft., with a heavy, ornamental, white-metal top and bottom. Between these is the square, plain frame, with

Fig. 8

beveled inner edges, mounted against the brass body of the sign. In the inscription and design of this plate there is another departure from methods already treated on. The letters are cut in by etching the panels and circle and filling with black. This leaves the letters of burnished brass. The etched border, however, is not filled with black, as the contrast between the panels and the burnished lettering is sufficient.

13. Characteristic Brass Signs.—In the brass sign shown in Fig. 12, the outline of the top of the sign plate carries out the idea expressed in the name of the hotel. The suggestion is English in style. The letters of this plate are quite unique, the centers being sunk to about one-half the thickness of the letters. The crown completes the significance of the design. While the sign is simple in design, yet it is classical. At the right of the sign is an example of the Abbott script.

Fig. 9

Fig. 10

Fig. 11

Fig. 12

CAST-BRONZE SIGNS

14. Substantial Character of Bronze Signs.—As the **cast-bronze sign** is the most substantial that can be produced by the sign maker, too much time cannot be given to the preparation of the design. Many examples of this enduring form of tablature exist to show the advancement made in the art from the most ancient times down to the present. It will be largely through its work in marble, bronze, and stone that the present generation will leave a record of its achievements that can be read by future generations.

The bronze tablet (if the best work is required) should be cast of statuary bronze. Using this metal, the surface of the letters may be highly polished; this gives the letters greater sharpness and also gives richness and finish to the sign in the strong contrast between the surface of the lettering and

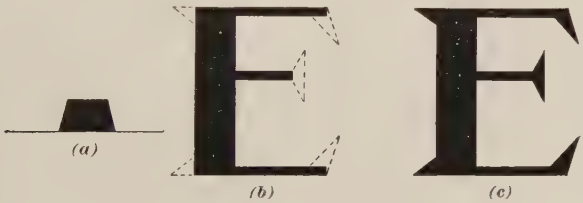


Fig. 13

the dead-bronze ground. The design must first be made in wood, and any carved designs that are used should be cut so as not to leave undercuttings that will cause the sand to break the edge of the design when the mold is prepared.

In a design in which are used a large number of letters of one style and size, strips of pine are cut to the size of the vertical and horizontal strokes. For example, in Fig. 13 (*a*) is shown a sectional view of the vertical stroke of the letter, in which can be seen the side bevel necessary to insure success in the casting. The height to which the letter should be projected above the surface depends on the size of the letter. For letters from 1 to 2 inches long, $\frac{1}{4}$ inch is sufficient, but letters from 3 to 6 inches long should be projected from $\frac{3}{8}$ to $\frac{1}{2}$ inch. In Fig. 13 (*b*) are shown the strips

set in place to form the letters, as far as possible. After gluing them on the board, the spurs and all letters with curved strokes are modeled by hand, plastiline or some similar material being used. The finished letter is shown in Fig. 13 (*c*).

An original style of bronze tablet is shown in Fig. 14. The background was first made from an impression of an undressed-stone surface; to this the letters were attached, and a cast was made from the whole. In such signs, it is advisable to cast the rosettes also. The sign may then be

Fig. 14

fastened by drilling holes through the centers of these and using long brass screws or brass-headed bolts.

The bronze design is made to fit all manner of columns and pilasters. In every case in which a sign is designed especially for one particular place, the sign maker should take into account the general architecture of the building and make his sign harmonize with its surroundings. Fig. 15 shows an excellent example of a bronze tablet fitted to a round column. The letters of this sign, on the Old English order, are artistic and in good taste for this particular design.

Fig. 15

In Fig. 16 is likewise shown a design in keeping with the character of the architecture of the building on which it is placed. The lettering of the sign, however, would be greatly improved had the designer given spacing a little study

Fig. 16

and endeavored to make all the spaces between letters of equal area, as shown in Fig. 17. The buildings on which the signs shown in Figs. 15 and 16 are displayed occupy, in frontage, one entire block, and each column or pilaster

MACY'S

Fig. 17

bears a sign, thus adding much to the appearance of the entire front of the buildings.

15. Gold-Plated Tablets and Signs.—Among the first-class sign makers are some who aim to produce work

that is classical and distinctively different in character and design from work produced by others. Figs. 18 and 19 are examples of work done by a leading artist in brass and metal signs. The former shows an eccentric treatment of the French Roman alphabet, both in relief and flat lettering. On the upper sign of this figure, the pearl border is used, which greatly adds to the appearance of artistic brass or bronze tablets. The filling of letters in high-grade metal signs is not confined to black; red, green, blue, and other colors are often used.

In Fig. 19 is shown a novelty in the form of a brass sign. The original was hung as a swinging sign in the medieval English style; it was projected from the building with an ornamental iron bracket at the top. The sign was a design of a house with open windows and door, the openings being cut with cold chisels; the lettering was burnished against an oxidized ground. Attention is called to the uniformity of style in which this design is lettered.

The Abbott script has come to be known among designers as a form most applicable to gold-plated window signs. Brass signs tarnish readily, and it is necessary to polish them daily to maintain their luster. The window sign, as well as all small, artistic brass plates that are exposed to the elements, may be gold plated, which will, to a great extent, render unnecessary the cleaning process. In the Abbott script, all the letters of each word are bound together by fine lines. These signs are of cast brass with a slightly concave back, that assists in holding the design firmly in position on the window glass. In Fig. 20 are shown three sketches of signs on this order, in which may be seen the character of the script and the method of joining the letters together. Spencerian script is seldom used for the gold-plated window sign, as the fine lines are not so well adapted to the brass casting as are those of the heavy script and other modified forms of the Spencerian.

In front of the Art Gallery of Chicago, Illinois, stands an elaborate example of the cast-bronze sign. The portion of the sign bearing the lettering, also the molding, were cast in

Fig. 18

CONCERNING RESIDENTIAL SVITES
IN THIS BVILDING TO BE KNOWN AS
RED HOVSE
WHICH WAS ANTICIPATED
COMPLETED AVGVST 12,1903
NOW READY FOR
OCCVPANCY.
AND CONTAINS TWELVE SVITES OF NINE, TEN
AND ELEVEN ROOMS, TWO MAIDS' ROOMS,
BVTLER'S PANTRY AND THREE BATH ROOMS
RENTALS 2000.00 TO 3300.00 PER ANNVM
PERMIT TO
VIEW SVITES
AND FVRTHER
INFORMATION
MAY BE OBTAINED
BY ADDRESSING
ERONEL REALTY
COMPANY
THREE AND FIVE
WEST TWENTY
NINTH STREET
NEW YORK N.Y.

Fig. 19

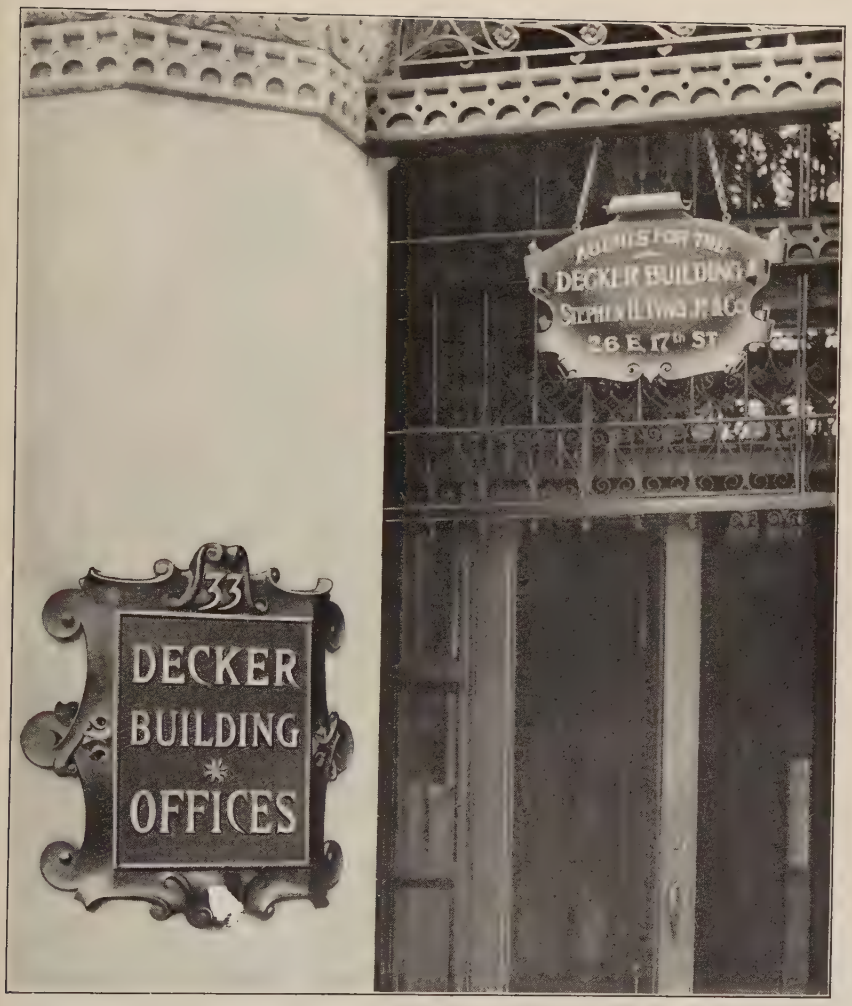


Fig. 22

relief lettering, suspended between two bronze standards. Above the door are cast-brass letters with polished faces, fastened to the fascia of the building.

On the Vose front, cast brass letters are also used, but the most imposing feature is the illuminated brass sign. This is placed on the top of burnished-brass posts and railing, which extends across the front beneath the window. The letters of

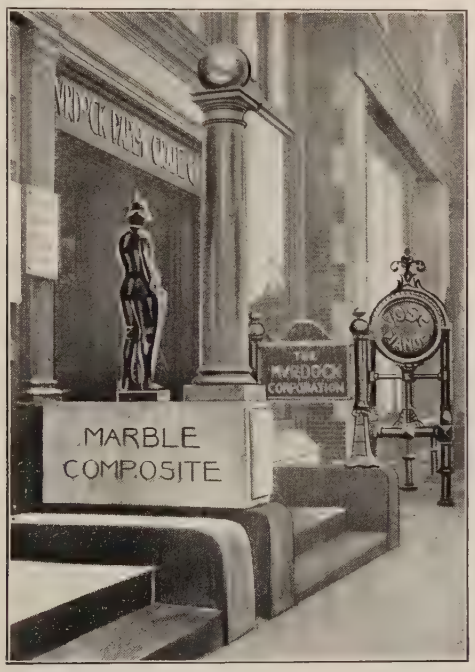


Fig. 23

the sign are in relief; in their faces small glass disks are set so that the wording may be plainly read at night when illuminated.

16. Historical Tablets.—One of the most conspicuous bronze tablets in New York City is the one shown in Fig. 24. The building on which it is displayed is on Broadway, on the site of the old New York Hotel. The design of the panel as well as of the ornamental work is an excellent study in light and shade, every detail of the work being shown.

MEMORIAL BRONZE TABLETS

17. Artistic Importance of Bronze Tablets.—Bronze tablets are found mostly in churches, public buildings, and colleges. They are the most expensive kind of memorial tablet, but there is no part of the building to which the attention is more quickly called, or that is of greater interest than the memorials it contains. As these are usually found in halls, auditoriums, or in other places that are more or less dimly lighted it would be extremely difficult to secure good photographs of the best examples of such tablets. We are therefore indebted to the Gorham Manufacturing Company, New York, for a number of their best examples of workmanship, some of which cost from $500 to $600 each.

18. Relief Design.—In the design of a heraldic shield and United States Army sword shown in Fig. 25 is an excellent example of artistic metal work. While the lettering is not such as is used today on this class of work, the artist has preserved uniformity in his inscription and has conformed the letters skilfully to his chosen text.

19. Figure Designs.—In the figure designs is exemplified the handiwork of the leading sculptors of America. The McClintock Memorial, Fig. 26, is the work of J. Massey Rhind, whose ability is too well known to require any comment. The lettering on this tablet is unpretentious, but sufficiently prominent to be in keeping with the drapery of the design.

The bas-relief portrait on the tablet shown in Fig. 27 is by Ralph Goddard. The tablet is 33 in. × 53 in. and cost $500. The lettering is also in bas-relief, and is of the French Roman alphabet.

Fig. 28 shows a design by B. L. Pratt, a sculptor, and Fig. 29 one by Oscar L. Lenz.

20. Various Designs.—There is, perhaps, quite as much merit displayed in the various modelled designs as in the figure designs. The versatility of the artist is brought out in the former, as they call into requisition all kinds of

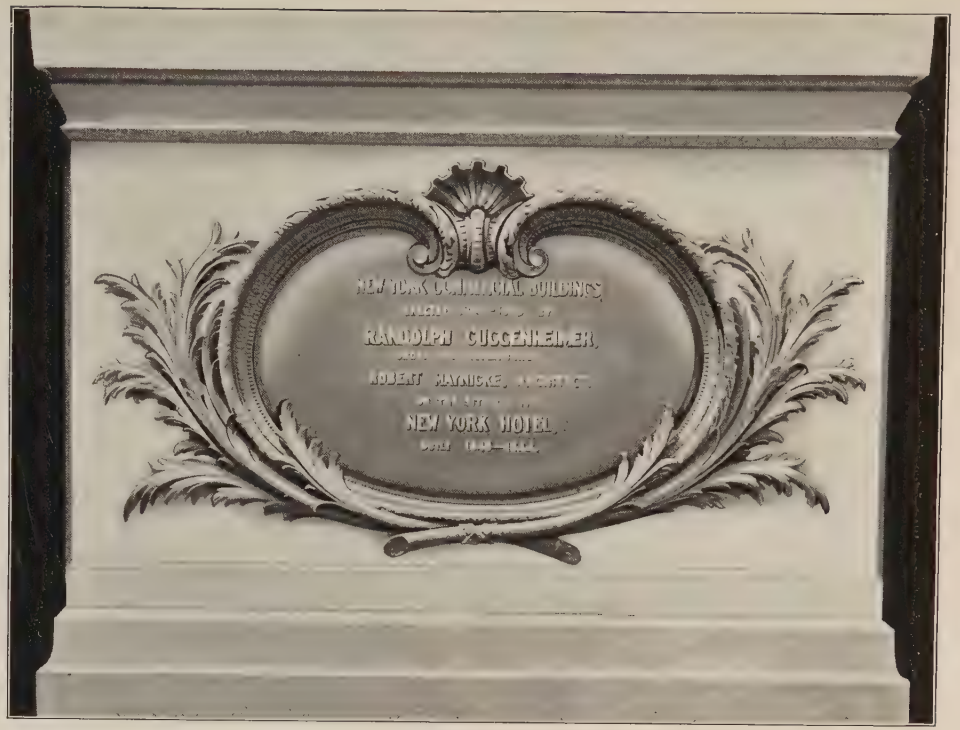

NEW YORK COMMERCIAL BUILDINGS
RANDOLPH GUGGENHEIMER
NEW YORK HOTEL

Fig. 24

TO THE
EDW HARRIS TOTTEN.
1ST LIEUT ANT 1ST US ARTILLERY
BORN WASH TON D.C. JUNE 7 1843
DIED WEST INT N.Y. JUNE 12 1878
IN A SUCCE FUL ENDEAVOUR
TO VE THE LIVES
OTHERS

Fig. 25

IN MEMORIAM
ANDREW FOLD
AUGUSTA
HELEN GRINNAN
ALICE McCLINTOCK DARLING
JEAN HAMILTON McCLINTOCK

Fig. 26

MDCCCLXXIX MDCCCXCIX
REV. JUSTUS CLEMENT FRENCH D.D.
FOR TWENTY YEARS THE BELOVED
PASTOR OF THIS CHURCH
BORN 1831 DIED 1899

Fig. 27

CORNELL
CLASS
OF
1900
TO THE
MEMORY OF
CLIFTON BECKWITH
BROWN
WHO DIED ON THE
FIELD OF BATTLE AT
EL CANEY
JULY FIRST
1898

Fig. 28

Fig. 29

Fig. 30

WILLIAM HENRY
HATHEWAY
1814 — 1875
FANNY ARNOLD
HATHEWAY
1820 — 1896
AND THEIR
CHILDREN
SETH
WILLIAM
HENRY

Fig. 31

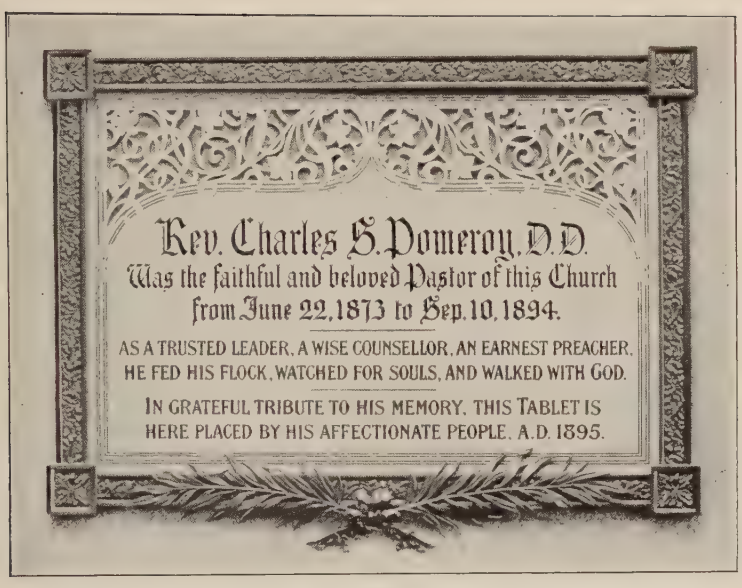

Rev. Charles S. Pomeroy, D.D.
Was the faithful and beloved Pastor of this Church
from June 22, 1873 to Sep. 10, 1894.
AS A TRUSTED LEADER, A WISE COUNSELLOR, AN EARNEST PREACHER,
HE FED HIS FLOCK, WATCHED FOR SOULS, AND WALKED WITH GOD.
IN GRATEFUL TRIBUTE TO HIS MEMORY, THIS TABLET IS
HERE PLACED BY HIS AFFECTIONATE PEOPLE. A.D. 1895.

FIG. 32

ERECTED BY HER CHILDREN
IN LOVING MEMORY OF
JULIA TOWNSEND MARSH
WIFE OF NATHANIEL MARSH
FAITHFUL IN ALL THE RELATIONS OF LIFE
FRIEND OF THE POOR AND GUARDIAN OF THE
SICK AND SUFFERING.
SHE ENTERED INTO REST NOV. 18, 1898.
"THE LORD GAVE, AND THE LORD HATH TAKEN
AWAY; BLESSED BE THE NAME OF THE LORD."

FIG. 33

IN LOVING MEMORY OF
SANDFORD · HUNT · D · D ·
FIRST PASTOR OF THIS CHURCH
AND FOR SEVENTEEN YEARS
AGENT OF THE NEW YORK METHODIST BOOK CONCERN
BORN 1825 —— DIED 1896
AND HIS WIFE
MARGARET · MAY · HUNT ·
BORN 1828 —— DIED 1900.
"THEY WERE BOTH RIGHTEOUS BEFORE GOD"
THIS TABLET IS ERECTED BY THEIR CHILDREN

Fig. 34

DR. SAMUEL PARKIS KNIGHT
JAN. 17, 1782 – JULY 25, 1862.
AND HIS WIFE
HARRIET EATON KNIGHT
NOV. 6, 1791 – JAN. 14, 1882.
MEMBERS OF
THIS CHURCH FROM 1814.

Fig. 35

architectural and natural forms, which are applied in a symmetrical and artistic manner.

An original form of screen tablet is that shown in Fig. 30. It was prepared as a testimonial of esteem to the donor of a public library to the city of Anaconda, Montana. The center of this testimonial is of silver, with relief letters.

Fig. 36

While these are lost in the reproduction of the photograph in the illustration, the general character of the design is clearly shown.

In the Hatheway Tablet, Fig. 31, is the draped urn that in itself is symbolical of mourning, and the cycas palm branch, significant of victory. The letters are in relief of the Antique Egyptian alphabet.

21. Combination Tablet.—The Pomeroy memorial, Fig. 32, consists of an etched brass plate with a cast-bronze border. The ornamental design is brought out in relief by etching the parts between with nitric acid. The letters are engraved and filled, also the stripes forming the border. The veining in the ornament is tooled with gravers only. The Church Text lettering in the body of the tablet is most appropriate to this style of design. The cycas-palm design in the lower border adds much to the classical value of the whole by counterbalancing the heavy ornament at the top of plate.

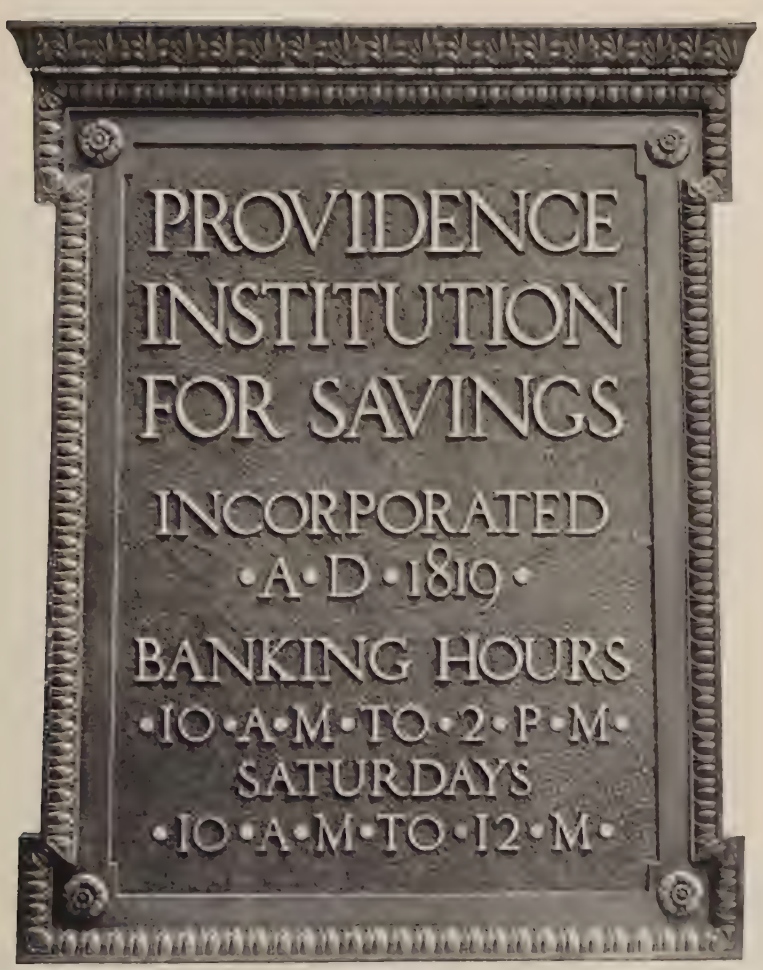
The heavy-bordered design shown in Fig. 33 is suggested by the framing of a picture. This, however, is artistically

Fig. 37

relieved by the sprays of cycas. The name being in Gothic letters, some relief is afforded to the style of lettering chosen for the balance of the inscription.

In the design shown in Fig. 34, the border is flat and beveled and the outline is ecclesiastical in design, in harmony with the place for which it was intended.

Fig. 35 shows a cast-bronze memorial tablet designed to be set in the wall of a church auditorium and raised from the surface of the plastered wall. It has, therefore, no border. The wreath of oak leaves forms a border to the letters and gives the whole a symbolical significance that is in harmomy with the first Psalm.


PROVIDENCE
INSTITUTION
FOR SAVINGS
INCORPORATED
•A•D•1819•
BANKING HOURS
•10•A•M•TO•2•P•M•
SATURDAYS
•10•A•M•TO•12•M•

22. Cemetery Tablets.—Cast-bronze tablets are used in cemetery monument work, as bronze will withstand the elements indefinitely. To fasten the tablet to the marble or granite, holes are drilled through the metal and into the marble, and rivets are firmly set with solder. The lettering, while not as legible as that engraved on the marble or granite, can be easily read by any one standing close to it.

23. Commercial Tablets.—The design shown in Fig. 37 is of a memorial tablet perpetuating the name of the builder of a town hall. The tablet, though extremely plain, is rendered classical by the style of letter chosen for the inscription and the excellent spacing and proportion observed.

The Providence tablet, Fig. 38, was designed by the architects of the savings bank building in Providence, Rhode Island—Messrs. Stone, Carpenter, and Wilson. It is an excellent example of architectural embellishment. The student's attention is called also to the classical lettering, the sharpness of the edges of the letters, and the ornamental border. With the exception of the disproportionate size of the periods, the work is a masterpiece, in design and casting.

SHEET-IRON SIGNS

24. Artistic Value of Sheet-Iron Signs.—The **sheet-iron sign** in its plainest application is, perhaps, the oldest known. With the modern development in electric lighting, the sheet-iron sign has become an illuminated sign, and has thereby doubled its commercial value. Today it is found among the most artistic and classical styles of sign used. A variety of such signs have been selected, sufficient to show their various applications.

25. Sheet-Iron Drum Sign.—The distinctive feature in the design of sheet-iron signs is the rolling of the metal into a scroll at the top or bottom of the design. This gives a peculiarly graceful effect that is attainable only in this form of sign. Fig. 39 shows the drum sign bent so

as to fit a corner, and yet not enough to destroy the legibility of the inscription.

The outline of the Alpers sign is artistic, with, perhaps, one defect: the bottom point should have been carried lower and made more acute, to counterbalance the design at the top. The raised letters are of cast brass, as are the red cross, mortar, and wreath.

While window lettering will be dealt with under the proper head, it may be worth while to call attention to the windows

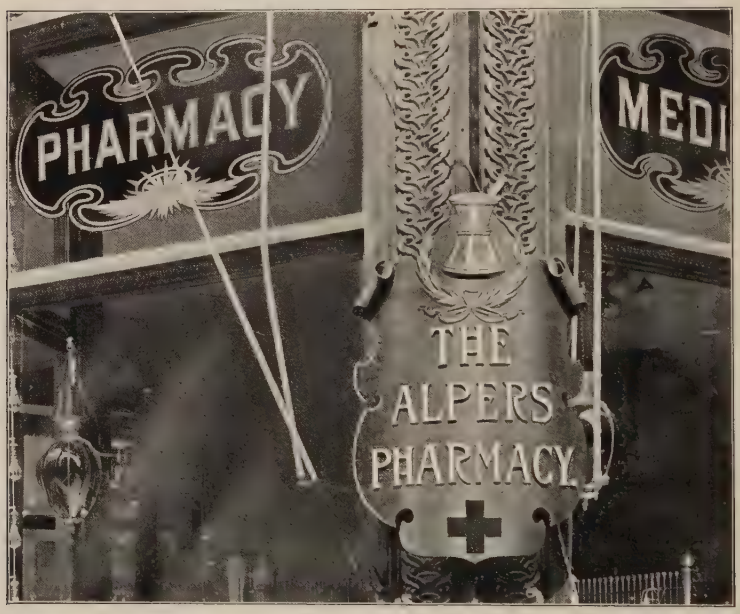


Fig. 39

of Alpers' Pharmacy, shown in this figure. The letters and design are outlined with gold, the background is stippled with dark green, and the letters with white, making a very attractive day sign, and one that is easily read at night.

26. Lamp Sign.—The Hanover sign, Fig. 40, is an excellent example of artistic workmanship. The elliptic design is appropriate to the inscription. The letters, as well as the elliptic border, are in relief.

Fig. 40

Fig. 41

DAYTON
PRECIOUS STONES,
FINE JEWELRY
AND
NOVELTIES
IN SILVER

FIG. 42

Fig. 43

The bronze tablet also shown in this illustration is worthy of close inspection, with regard to both lettering and spacing, as well as to the general character of the design.

27. Appropriate Designs.—There is, perhaps, no better display of taste in the preparation of a sign for a classical business than that shown in Fig. 41. The designer has used the breast plate and gauntlet of medieval period, the former carrying the sign inscription, while the latter suggests the business advertised. The lettering, although not classical, is not out of harmony with the general character of the design.

28. Ornamented Sheet-Iron Signs.—The Dayton sign, Fig. 42, is a sheet-iron sign relieved with cast ornaments and trappings. The sign is apparently suspended by a chain held in the mouth of a dolphin. This, however, is only for effect, as the sign is firmly fastened to the building. The cast ornaments are riveted to the sheet metal, and the chains are linked through holes. The lettering is of gold on a reddish-brown ground, while the ornament is painted with a tint of the same color. The whole makes a very artistic sign.

29. Cut-Out Inscriptions.—The Stumpp sign, Fig. 43, presents several novelties not met with so far in the examples of sheet-iron signs. The letters are cut out and opal glass is set in the back of the sign. The design is in full relief. The helmet and battle axes stand out prominently from the building. The style of letter, a stub-script, is not well executed and rather mars the appearance of the design; the numerals are entirely out of harmony with the letters. This point, however, passes unobserved to those unskilled in letter formation. A cast relief border is used to embellish the edges of this sign, and also as an ornament above the lettering.

30. Inexpensive Sheet-Iron Signs.—In Fig. 44 is shown a plain lettered sheet-iron sign made to show from opposite directions. Two sheets of iron are held together

with rivets passed through the irons that are used as brackets to fasten the sign in place. The corners are rolled scrollwise, this being the only attempt at the ornamental. The lettering, being white, is edged with gold.

31. Post Sign.—In the Lyceum Theatre sign, Fig. 45, an example is given of a sheet-iron sign that also serves the purpose of an illuminated sign. The design is an excellent

Fig. 44

example of symmetrical curves, worked out in sheet and forged iron. The side pieces are set far enough apart to allow for the adjustment of electric lamps, which is done through openings in the side and top. Between the sides, at the edges, pieces of wood or metal are attached, which confine the illumination entirely to the letters. The letters are cut out with cold chisels, and white opal glass is placed on

Fig. 45

Fig. 46

Fig. 47

the inside of the sign, thus effecting a strong contrast, both in daylight and at night.

The sign is wired, so that the lights may be switched on and off from the office of the theater.

HAMMERED-COPPER SIGNS

32. Swinging Sign.—A novel metal sign is the **hammered-copper sign.** Owing to the malleability of copper, bas-relief designs can be worked out, and many beautiful effects produced in the line of ornament.

The swinging sign shown in Fig. 46 is a good example of a plain copper sign. The letters may be cut out of brass and gold plated, or they may be cast in bronze with a gold-plated or burnished face. The hanging of this sign is somewhat unique, and at the same time most substantial.

33. Sidewalk Sign.—The sidewalk sign shown in Fig. 47 is a combination of hammered brass and forged iron. The sign proper is a relief design, and the letters are brought out in further relief. The extremities of the shield are rolled up like the ends of a scroll, as in the sheet-iron signs. The copper design is mounted on an ornamental iron design fastened to a heavy standard. The crown and tulips also are hammered copper. This sign, not being substantially fastened to the sidewalk, has evidently met with more hammering than was originally intended, as part of the crown is missing and the scrolls are rather disfigured.

The real-estate sign shown in this illustration is worthy of attention on account of the workmanship in the light-stroke raised letters, which are sharp in detail and graceful in outline.

ELECTRIC SIGNS

34. Modern Applications.—**Electric signs** of every style, from the *talking sign* to the permanently lighted sign, have taken such an important place in the principal streets of large cities that they have literally transformed night into day. Flash signs are always the first to catch the eye, but

owing, perhaps, to the expense of running these and the attention they require to keep them in running order, they are fast giving place to the permanently lighted sign. For certain purposes, however, the flash or monogram sign is indispensable, as for carriage calls, electric-flash clocks (recording the time every minute), and other similar uses.

Fig. 48 illustrates a monogram flash sign that will show every letter of the alphabet and also the numerals. The cylinder below the letter shows the method of operation; forty changes can be made on each cylinder. When once adjusted, the sign works automatically.

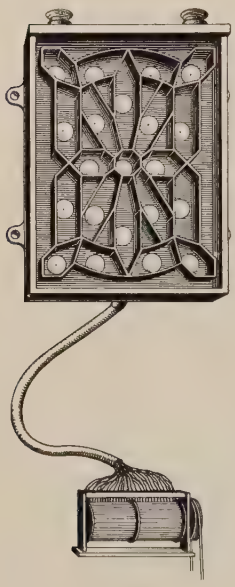


Fig. 48

In addition to the monogram flash, there is the sidewalk disk, the color flash, the periodical flash, etc., operated by various kinds of revolving switchboards.

35. Permanent Electric Signs. On the Levey corner, Fig. 49, are shown two styles of the permanent electric sign. In the one directly on the corner the letters are cut out of 2-inch seasoned lumber and painted white. On the faces of the letters, electric lamps are placed so as to show their outlines and illuminate their faces.

It will be noticed, on close inspection, that at the back of the sign a wide strip of bar iron unites the letters, giving them sufficient strength to withstand a violent wind pressure. This iron strip serves also as a brace in fastening the sign in position. It is painted with some dark color and is not noticeable at a little distance from the sign.

The dentist sign opposite the stairway, also shown in Fig. 49, is an inexpensive but most practical form of electric sign. The sign is of enameled iron, with a blue ground and white letters, set in a beveled frame. Around the inside

Dr. de Walloff Dentist
Dr. de Walloff Dentist
DENTISTS
DENTISTS
DENTISTS
Levey
Levey
Levey DYER
THEATRICAL CLEANSE
CLEANSER
DENTIST.
HAIR
SCALP
MANICURE
MARCEL
WAVING

Fig. 49

of the frame, lamps are set at such an angle as to throw the light directly on the face of the sign.

36. Electric Wire Signs.—Fig. 50 presents an example of a projected sign that is to be read from two opposite directions. The shield-like design is illuminated as well as the letters at the top of the sign. It is necessary to panel the wire when the letters are to show from opposite direc-

Fig. 50

tions and illuminate the letters on both sides of the sign. The letters in the illustration are cut of kiln-dried pine and painted white, and to these the electric lamps are attached. The two lower signs on the shield, being of a temporary nature, are not wired for illumination, as the number of lamps used is sufficient to make these signs legible at a great distance.

37. Vertical Electric Signs.—In the Gardiner sign, shown in Fig. 51, no wire work is necessary. This sign

FIG. 51

consists of a frame, around which there is a row of electric lamps; it contains a bevel-edged board with raised bevel-edged letters painted white. The sign is projected from the building by the use of peg hooks and eye irons, of the same kind seen on heavy iron gates. When swung out in a position perpendicular to the front of the building, it is stayed with iron rods.

38. Painted Electric Sign. One of the earliest electric signs known to the writer is that shown in Fig. 52. The letters of this sign are white, with an outline of gold surrounding them. The ground is smalted with dark-green smalt, giving the sign a rich appearance as a day sign, and combining under illumination to advantage with the white and gold. The sign on the front extends across the entire building, and is lettered in the same style as the side sign.

39. Raised-Letter Electric Signs.—Fig. 54 illustrates an electric sign in which the electric lamps are concealed. The sign is of sheet metal, to which wooden letters are attached. Surrounding each letter and parallel with the edge of the sign are round holes made as closely together as possible. The sign lamps are placed

Fig. 52

Fig. 54

FIG. 53

at the back of the sign and through these holes the inscription and outline of the sign board are illuminated. The sign is smalted with diamond smalt, the glitter of which makes the sign more attractive.

Fig. 53 represents a photographic reproduction of the same sign taken at night. On account of the foreshortened view of the long sign, its illumination does not show; but the diamond-shaped sign will fully illustrate the lighting effect and the illumination of the raised letters. On close inspection, the reflection of light from the diamond smalt may be seen.

PROJECTING SIGNS

40. Swinging Signs.—A swinging sign on the heraldic order is shown in Fig. 55. This sign is cut out of sheet iron. The raised design is cast in brass and fastened on the sheet

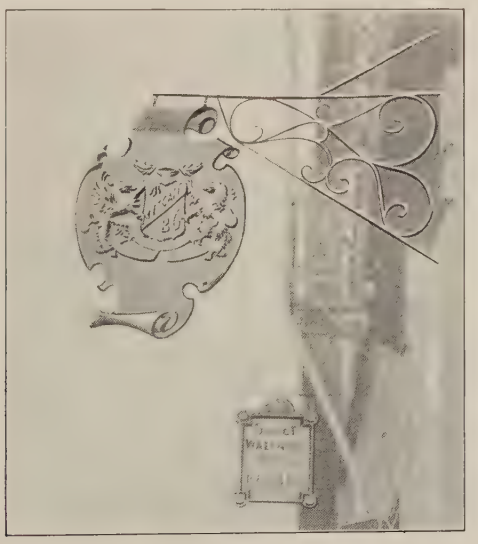


Fig. 55

metal with brass rivets. The sign was given a tint made from old-rose color, and the design and scrolls were shaded in a deep rich red, in harmony with the ground color. The

sign was suspended from a light ornamental iron crane, substantially braced from either direction.

41. Carved Swinging Sign.—The design shown in Fig. 56 is a combination of a helmet in full relief with letter-

Fig. 56

ing in bas-relief, which together make an attractive design. The helmet and ornaments were gilded as well as the raised and carved letters. The upper part of the sign was painted a dark green, with striping across the face of a lighter shade

Fig. 57

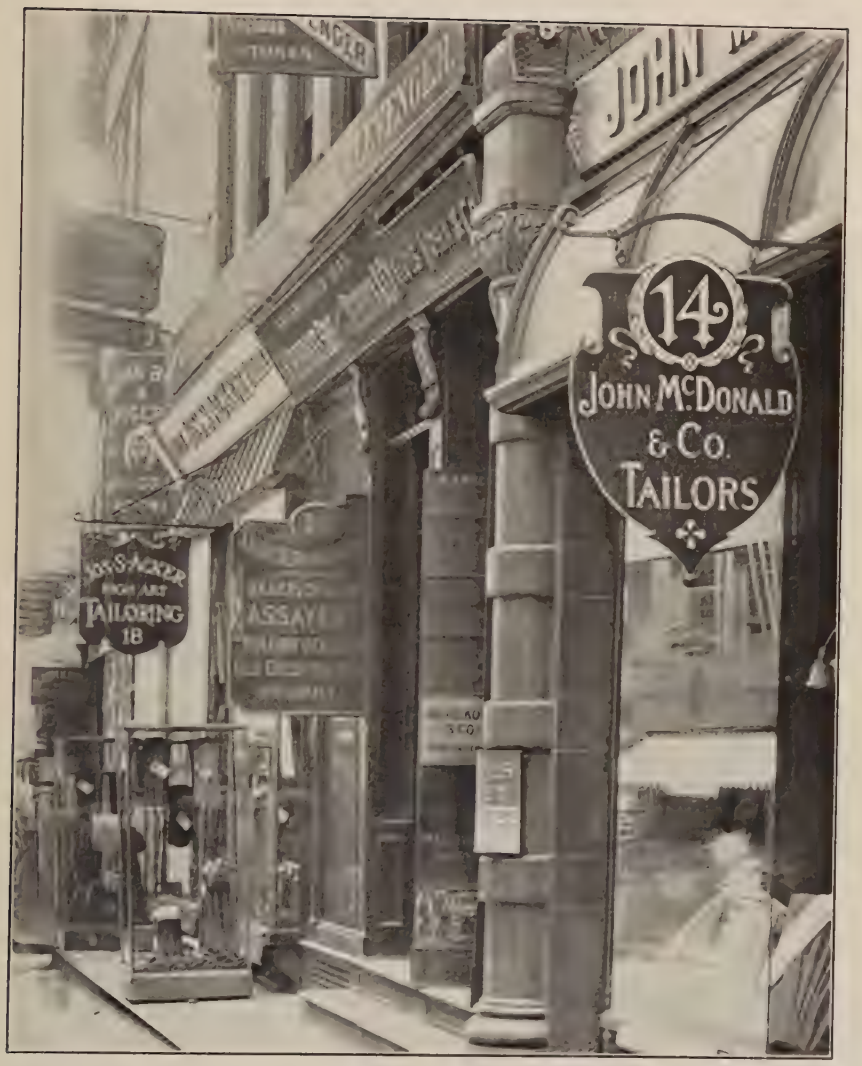


Fig. 58

of green. The panel on which the name appears was carmine, and the ground of the lower portion was black. The attention is called to unsymmetrical curves in the iron work that destroys the beauty of the sign to a very great extent; also to the poor taste displayed by the sign hanger in using galvanized wire for braces rather than light iron rods.

42. Changeable Projecting Signs.—Fig. 57 is an excellent example of an ornamental iron sign. The panels

Fig. 59

containing the numbers and the name are of cast bronze, while the main body of the sign consists of a sheet-iron plate that slides into grooves in the frame. Signs of this kind may be changed from day to day to call attention to successive special bargains or lines of merchandise. The illustration is therefore of two-fold importance as a projecting sign.

43. Natural-Wood Swinging Signs.—In the illustration, Fig. 58, in which signs are numerous, there is a good

opportunity for the student to study the lettering and arrangement of a number of the various designs; but the two signs to which attention is especially directed are the McDonald and the Acker signs. These are made of solid oak. They are first filled with a corn-starch filler that brings out the grain of the wood and gives it a smooth surface, after which they are varnished with a slow-drying finishing varnish. The examples shown are lettered in gold and outlined with a heavy line of black. The chamfered edges are likewise gilded. In the Acker sign, ornamental strap hinges are used to attach the sign to the crane, which, in that particular design, greatly adds to its artistic merit.

44. Iron-Bound Swinging Signs.—It may be important to note that Figs. 58 and 59 show that where a sign is especially attractive because of some artistic feature, it is likely to be copied by a neighboring tradesman, and usually by one in the same occupation. This is in poor taste, and shows that either the merchant or his sign painter is devoid of artistic ideas and unable to be independent of other's ideas.

The distinctive feature in the Hurry and the Moelter signs is in surrounding the board designs with ornamental ironwork. The advantage, aside from the ornamental feature, is that the boards being stayed at close intervals to the frames, they will always remain rigid and not warp or check. These signs are lettered in plain gold, and smalted with black. A stripe of gold also surrounds the edge of the boards, outside of which are borders of color or jet black.

45. Relief Letters and Borders.—The two projecting signs shown in Fig. 60 are examples of relief work. In the Farrand sign the letters are in relief, while the band and stripe within this are plain. The Phelps sign is reversed, the raised work being confined exclusively to the border, while the letters are in plain gold. The panels on which the raised letters are placed in the Farrand sign are smalted with blue smalt, and the balance of the sign with black. The ground of the Phelps sign is a dark-green smalt.

O·M·FARRAND
IMPORTER OF
DIAMONDS
AND
WATCHES
3
WILLIAM R. PHELPS
& CO.
DAVID N. PERRY.
3A

Fig. 60

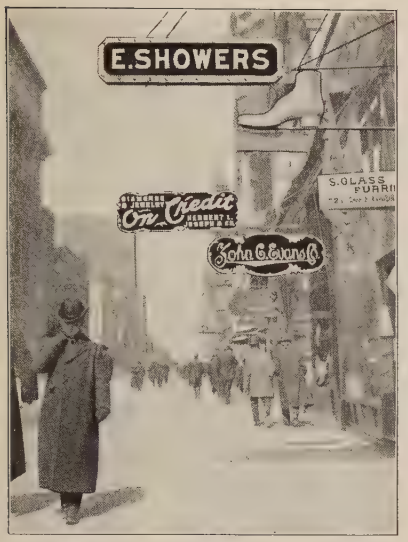


Fig. 61

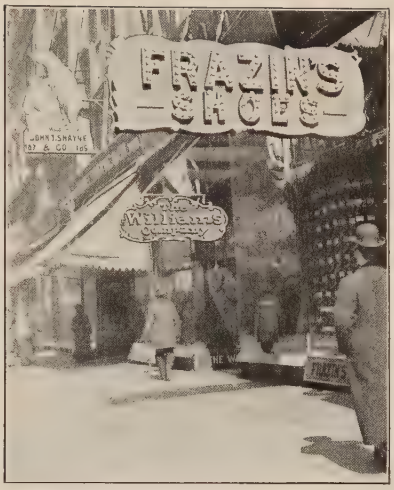


Fig. 62

Fig. 63

Fig. 64

46. Various Styles of Projecting Signs.—In the four street views of Chicago, Figs. 61, 62, 63, and 64, a large variety of projecting signs may be seen. Fig. 61 shows one form of illuminated sign in which the raised letters are placed on a panel; around this, lamps are set. The large gold shoe is an attractive feature of this group of signs.

In Fig. 62 the letters of the Frazin sign are sawed out of 2-inch pine and painted white, lamps being set in the faces of the letters. This is, perhaps, the most popular form of electrically lighted sign, both for its utility and comparatively small expense.

The Williams sign, just beyond this, is an excellent example of a neat raised letter and a rococo border suitable to the inscription.

Beyond the end of the Frazin sign is the electric-lighted bear sign that is at night one of the most conspicuous in Chicago. The bear is painted white and illuminated by electric lamps placed entirely around the edge of the design, The name Shayne is also outlined with electric lamps at the base of the sign.

In Fig. 63 are two signs, the first of which is gilded and the border worked out in gold shaded with asphaltum varnish to imitate relief work. The sign beyond has a carved border and is lettered in relief.

Fig. 64 shows a very ornamental bracket from which a large white-faced gold watch is suspended. The Swanson sign just beyond this is one of the beveled plate-glass signs with which Chicago abounds. The letters are illuminated by electric lamps within the sign. The pieces of beveled plate that form the border are fitted together and either gilded or silvered, having first been chipped or embossed. This form of glass sign is patented.

WINDOW LETTERING

47. Transferred Designs.—In Fig. 65 is shown an example of glass lettering and oil painting. To all appearances, the lion's head is painted directly on the glass. While this is possible, yet it would be a very difficult operation, and for this reason a more convenient method is resorted to. The

Fig. 65

head is painted on transfer paper—a paper coated with several applications of gum arabic. After painting the head directly on this with oil colors, when dry, it is transferred by the regular process of decalcomania. In the illustration, the stripe around the belt is of bright gold, with a heavy black line

Fig. 66

Fig. 67

inside and outside the belt. The letters are black, and the belt ground white; the latter is shaded with a gray blended shade where required.

48. Shaded Relief Designs.—In choosing the examples for these illustrations, the intention has been to show a variety of designs that would best serve to illustrate all manner of sign work, and the various methods employed in their execution. In the examples of glass lettering, therefore, few

Fig. 68

examples have been shown of plain window lettering or plain signs. In Fig. 66, an eagle design is worked out in gold directly on the glass. This work is done by hatching the gold with needles and sharp-pointed maple sticks. After the work is sufficiently shaded, it is backed up with black or dark brown and subsequently with a protecting coat of varnish color.

Fig. 67 shows another process that accomplishes the same effect, although the operation is the opposite of that shown

in Fig. 66. In this example, the owl is first carefully drawn on the outside of the glass, or, better still, a thin sheet of Manila paper is taken, and the design, having been drawn on this, is fastened on the outer side of the glass with mucilage. The shading is done with asphaltum and varnish, strengthening the shades by applying one over the other. When dry, the design is gilded. The design shown in Fig. 66 is gilded first. The letters in the owl design are outlined with bright gold and filled in with dead or Etruscan gold.

Attention is called to the frieze of the window, which is an artistic piece of stained-glass work.

49. Paneled Window Lettering.—Fig. 68 shows a window that is a relic of the earlier school of lettering. The panels and disk are backed up with solid colors. The border and letters are brought out in gold and strong harmonious colors, embellished with pearl. The dome of the Capitol at Washington being the central feature in the design, it is outlined in black, shaded and backed up with a solid pearl background.

While such elaborate examples of window lettering are scarce at the present day, they are unsurpassed by modern styles of window lettering in opportunities for showing the versatility of the letterer, both as a designer and as a colorist.

50. Translucent Window Designs.—Perhaps no example will better illustrate modern window lettering and designing than that shown in Fig. 69. Few stores or places of business can afford to sacrifice daylight by obstructing the window with an opaque design. This has led to the translucent design that serves also as a transparency, thus taking advantage of the abundant interior illumination in a most practical way. In this illustration the elliptic panel is surrounded with a pearl border of silver. The ground color on the ellipse is a dark green stippled in imitation of ground glass. The letters, as well as the wreath and lamp, are outlined with burnished gold and filled in with dead or Etruscan gold.

GALL & LEMBKE.
GALL & LEMBKE. OPTICIANS.
GALL & LEMBKE.
OPTICIANS
GALL & LEMBKE.
OPTICIANS
GALL & LEMBKE.
OPTICIANS

Fig. 69

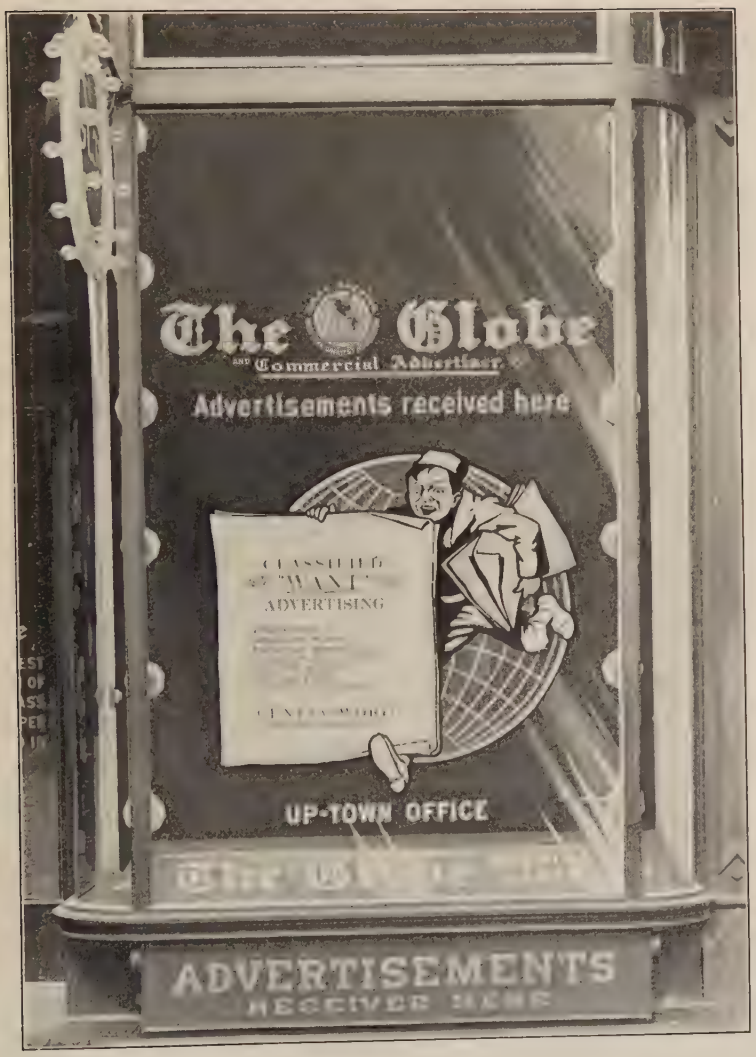

The Globe
and Commercial Advertiser
Advertisements received here
CLASSIFIED
"WANT"
ADVERTISING
UP-TOWN OFFICE
ADVERTISEMENTS
RECEIVED HERE

Fig. 70

3.50 = THE EMERSON SHOE $5.00
335
The Emerson Shoe
For Men and Women

Fig. 71

Fig. 72

FIG. 73

51. Novel Designs.—Fig. 70 illustrates one of the most attractive windows on Broadway, New York. Not only is this attractive because of the excellent workmanship, but because of the character of the design. The lettering of this window is done in gold. The poster held out by the boy is printed and stuck on the back of the panel, there being perhaps 2 or 3 inches of margin painted white. The globe is outlined in gold and backed up with blue. The boy is of burnished silver shaded with black.

52. Trade-Mark Designs.—Among the lettered windows of every large city there are designs that are used exclusively by one particular concern. Especially is this true in regard to manufacturers or large jobbers conducting large numbers of retail stores scattered throughout the country.

In Fig. 71 is shown one such design. In making such as this, as well as facsimile signatures, the sign painter must follow his copy closely in every detail. The lettering of this particular design is done in plain burnished gold outlined with black. The excellence of this work consists wholly in making the long curves symmetrical; also, in spacing and forming the letters with accuracy.

WIRE SIGNS

53. Raised-Letter Wire Signs.—In the Meyrowitz sign, Fig. 72, is shown an example of a most practical application of the wire sign. This sign covers a window that admits light into the store, and the style of the sign chosen does not obstruct the light to any marked degree. The letters of this sign are gilded wooden, raised letters; the griffin design also is carved out of wood and gilded.

54. Backed Wire Signs.—In order to prevent the confusion of lines or objects at the back of a wire sign, they are sometimes backed with some inexpensive material; boards being generally used where the sign is large. The Blyn signs, Fig. 73, are good examples of **backed wire**

signs. They likewise show excellent workmanship, in the general design as well as the details of each portion of the work. The letters are in relief and gilded.

Attention is directed also to the wall lettering on the side of the store. The field of the panels and ribbons is laid in with harmonious shades and tints. The only strong colors in the design are used in the lettering. The entire space on which the design is placed is blended from a strong color at the bottom to a light shade in the middle of the panel, and from this into another color of harmonious strength at the top.

DEAD-WALL AND FENCE-BOARD SIGNS

55. In Defense of Street Advertising.—There is a periodical tirade against the advertisements in public thoroughfares. While perhaps the public eye may occasionally be offended by indiscreet advertising, and justly so, yet it must be admitted that the character of the modern fence sign is fast becoming artistic and classical in form. In no sense are they unsightly as compared with the débris they obscure from view. In many cases, the advertising fence guards the safety of pedestrians by protecting them from flying fragments of brick, stone, or wood. As this form of advertising has come to stay, an urgent appeal is made to those interested in preparing the work to continually seek to improve the standard of excellence of the advertising sign and thereby win over those who denounce the advertising sign board as offensive or unsightly.

56. Large Dead-Wall Advertising.—It is not necessary in this Course to criticize modern business methods or to apologize because so many of the examples of signs used advertise whisky and tobacco. The aim of the Course is to present the best examples extant in every line of signs and advertising, and the great variety of examples necessarily forbids discrimination. The fact is plainly evident, however, that the staple commodities of life are produced and sold at so close a margin that they do not, as a rule, permit of extravagant advertising. The greatest profit, therefore, is

WILSON
High Ball
That's All
Cremo
5c
Cremo
5c
BROADWAY THEATRE
FRITZI SCHEFF
BABETTE
Lea & Perrins' Sauce
Mother Goose

Fig. 74

SKIRTS
AMERICAN SKIRT CO
What Will The Parrot Say?
What Will The Parrot Say?
What will the Parrot Say?
What Will The Parrot Say?
What will the Parrot Say?
What Will The Parrot Say?
What Will The
MOVING VANS

FIG. 75

made on such articles as are produced cheaply, and it is in advertising these, whether they are good or bad, that the manufacturer or jobber meets with greatest success in his sales.

Fig. 74 shows one of the largest and most attractive dead-wall spaces that has ever been painted. It will perhaps be surprising to some to learn that such spaces, remaining but

Fig. 76

a few weeks, cost the advertiser from $1,500 to $2,000. The reason for this is that such spaces are scarce on great thoroughfares like Broadway, New York, and in no place in the world would an advertising sign be seen by a larger transient public than in this famous highway. In the example shown, the figure is of colossal proportions, about 60 feet high. The top of the head is carried above the top of the roof by ingeniously building it up with boards and bracing it

with iron braces at the back. To add to the attractiveness of this advertisement the water running from the bottle to the glass, instead of being painted, was a stream of running water piped through the wall. The tumbler was built out enough to receive the water, which was piped back into the sewer. It will be noticed that very little space around this corner is unused by the progressive advertising-sign company.

Fig. 77

Figs. 75 and 76 illustrate an appeal to the curiosity of the public. Fig. 75 shows the beginning of the advertising campaign. As soon as the work of removing the old building was begun, every available space was covered with cheap signs reading, "What will the parrot say?" When the building was even with the ground, the ring and parrot were

Fig. 78

Fig. 79

nc.
TS
hST.
Hunter
Baltimore
Rye
SUPERB
QUALITY
RICH
FLAVOR
THE NE
FOR YOU
William
EXPERT
OPTICIAN
OCULIST
PRESCRIPTIONS
OUR
SPECIALTY

Fig. 80

painted on the dead wall and allowed to remain with no lettering or other marks to indicate the purpose for which it was placed there. Ten men were then set to work with five scaffolds, and the advertisement was quickly painted in, as shown in Fig. 76.

Fig. 77 shows a white wall on which is painted an exact representation of various packages of milk chocolates. Those familiar with the colors of these packages will appreciate the work of reproducing them in advertising form.

Fig. 78 shows two shrewdly located dead-wall advertisements, rendered especially effective by the range of view enjoyed by them. The location is the down-town East-Side tenement district of New York City.

BOARD SIGNS AND FENCES

57. Field Boards.—Railroads that carry many thousands of passengers daily offer to the advertiser a medium for bringing his goods before the notice of a large number of people. This has led to the field sign, which may be seen in close proximity to large cities and are often set so closely together that very little space intervenes. Fig. 79 shows a double row of detached field boards. Being necessarily read quickly, very little detail should be used in the designs.

58. Plain Designs.—There is no plainer advertising board than the black and white one. Black and white, next to dark blue and white, make the most legible sign. In Fig. 80, the letters are outlined with blue, and the panel on which the horse is painted is Indian red. With a white stripe surrounding the black ground, and a cream margin, this plain sign is made quite attractive.

Fig. 81 shows several designs, but the one that should be particularly noted is the white and black board—Young's Hats. Among a variety of artistic designs, one or two plain signs show to advantage, besides strengthening and bringing out, by contrast, the several designs on the fence.

59. Still-Life Design.—Fig. 82 shows a most artistic design, both as a pictorial production and also for the suitable

Fig. 81

style of lettering chosen for the inscription. The Gude Company, whose work this is, employs a corps of artists especially qualified for certain kinds of work. They are furnished with a photograph of an original painting, a carefully studied oil or water-color painting, or they are given a photograph taken directly from nature.

Fig. 83 is taken from the artist's working print, and Fig. 84 shows the artist's reproduction of the same design, 12 feet high. In the latter illustration, the student's attention is called to the character of the work on the balance of this sign board. The word "Proctor's," which is in antique lettering, was not the creation of the modern letterer; it is used as a trade mark. Fig. 85 shows this same board taken from an elevation in order to show the unsightly mass that is hidden from view by the advertising fence board that so many denounce.

60. Dutch Designs. At the present time, Dutch scenes and Dutch characters have become quite popular

"All Over Town"
Young's Hats
Stores on Broadway and Fifth Avenue
Entertain in your Home!
GOLD SEAL
CHAMPAGNE
Better than imported for
CUPS, COCKTAILS and PUNCHES
LESS THAN ONE HALF THE PRICE

Fig. 82

Fig. 83

for Smart Plays Fine Vaudeville Every Afternoon and E
PROCTO
4 Beautiful THEA
SIC HALL
2ND ST
MANAGEMENT
OMPSON & DUNDY
TOM W. RYLEY.
EMPIRE
BALLETS
DIRECT FROM LONDON
SMOKING
BALCONY
73rd St
5th Ave
86th St
125th St
Hunyadi János
NATURAL LAXATIVE WATER
CONSTIPATION
HEPNER'S
HAIR EMPORIUM
MANICURING
1556 BROADWAY
Bé

Fig. 84

Fig. 85

Royal-Acme-Mitchell
CARS THAT CONTENT"
THE DUERR-WARD COMPANY
BROADWAY
58TH ST.
"All Over Town"
Young's Hats
NONE BETTER MADE
Stores on Broadway and Fifth Avenue.

Fig. 86

Rambler
AUTOMOBILES
"The Popular Shop"
Dutch Ware
Quaker Oats
Uneeda Biscuit

Fig. 87

among designers. The advertising-sign painter has lost little time in recognizing and acting on this fact by using Dutch figures in board-fence advertising. In the example, Fig. 86, the automobile advertisement is of this kind.

Fig. 87 shows an example of Dutch design throughout, the board itself being on this order. With a little study, the

Fig. 88

student will appreciate the artistic merit of this design, some points of which perhaps would be overlooked in a cursory glance at the illustration.

61. Illuminated Sign Boards.—On the tops of many buildings in the principal cities, large advertising boards are

placed in a position where they may be read from the main thoroughfares. Many of these are illuminated so as to be read as easily or more easily in the evening.

In Fig. 88 is shown a reproduction of a photograph taken late at night showing an advertising sign illuminated. The electric lamps are hidden from view and the light is thrown on the face of the sign by strong reflectors placed at the top of the board.

Fig. 89 also shows a corner where advertising signs are quite thick. The largest is illuminated from the top of the sign, while the Robert Burns sign has lamps set in the white letters.

62. High-Art Coloring in Fence Signs.—The board shown in Fig. 90 is, without exception, the finest example of artistic coloring extant. It was generally known that the board was permitted to be placed in position only with the understanding that the color scheme was to be submitted to and approved by the National Academy of Design, on whose land the board is placed. The spaces are paneled and bordered with terra cotta, robin's-egg blue, cadmium yellow, etc., together with neutral tints combining most harmonious color values. The work as a whole attracted attention as much for the artistic coloring of the panels as for the inscriptions borne by them.

63. Novel Advertising Spaces.—Fig. 91 shows an advertising sign not particularly noticeable for the design, but useful as an illustration of the persistency of the advertising-sign company, as well as of the advertiser, in securing the most conspicuous sites for the sign board.

The surprising fact in this site is that this hotel is situated on Broadway, New York, in one of the busiest centers of that great city, and that the hotel is by no means a cheap or inferior house. The more astonishing, therefore, it would seem that such a prominent space could be secured for advertising purposes. There are many examples of a similar nature to be seen in every large city, but the one here chosen is perhaps the most conspicuous witness to the invincibility of the advertising-sign man.

Anheuser-Busch's
BUDWEISER
NORTH SOUTH EAST WEST
Uneeda Biscuit
5¢ NATIONAL BISCUIT COMPANY 5¢
ROBERT BURNS
CIGAR
Levey
GLASGOW TAILORS
SUIT TOPCOAT
TAILORS

FIG. 89

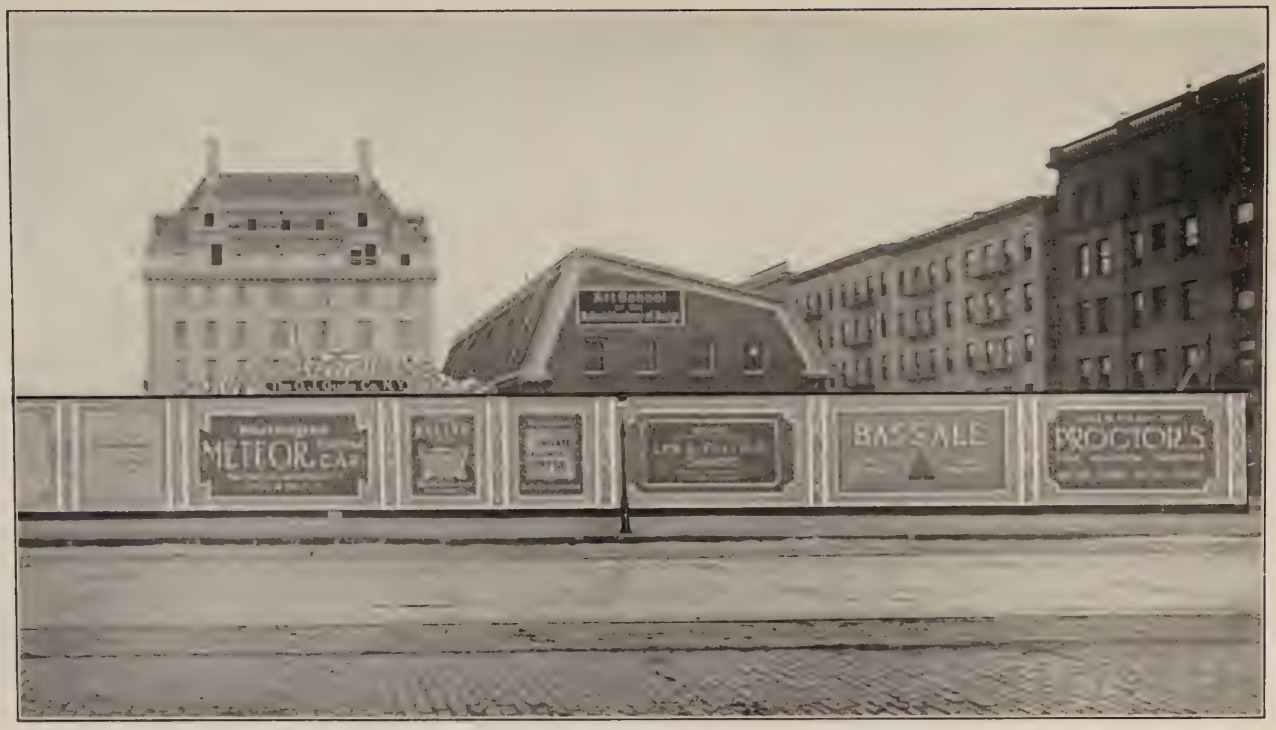


Fig. 90

This is the Maid
you see about Town.
Who always sends
her Opera gown
to Levy the Cleanse
of World renown
Levy

FIG. 91

Does not Bite the Tongue
POCKET SIZE
LUCKY STRIKE
SMOKING
TOBACCO
CUT PLUG
FRAGRANT DELICIOUS
Blue Label
Ketchup-Soups
DELICIOUS, APPETIZING, SATISFYING
20 varieties
BLUE LABEL SOUP

Fig. 92

L'AUTO-BOLIDE
A DARING
DIP of DEATH
AN ACT THAT COSTS $2,000. A Minute
The BARNUM BAILEY
GREATEST SHOW ON EARTH
MADISON SQ. GARDEN
Thursday MARCH 23
"Get in the Swim!"
Herald Square Baths
TURKISH AND RUSSIAN
Broadway at 32nd Street
BROWNING BUILDING
FOR GENTLEMEN
An Entrance on 6th Ave.
OPEN DAY & NIGHT

Fig. 93

The NEW
Columbia
SHIRT
Absolutely Correct!
BLOCK
Block
Light

Fig. 94

64. A Variety of Boards.—Figs. 92, 93, and 94 show sections of the large fence board on the abandoned church property at the intersection of Broadway, 34th Street, and 6th Avenue, New York. This being a most prominent part of New York City, many of these spaces are painted with the finish of a permanent sign. The Blue Label sign, Fig. 92, with a blue ground and white letter, outlined and shaded with

Fig. 95

black, is one of the most pleasing combinations or designs that can be used for advertising boards. The red ketchup and the colored label on the can form an excellent color contrast. Attention is also directed to the artistic scroll work above the sign of Curtice Brothers. The scrolls are in light yellow, shaded with burnt-sienna tones, and the panel is black with white letters.

Fig. 93 shows an example of attractive art work, the design of the bath being quite unique. The dark-green water forms an excellent background for the lettering.

Fig. 94 shows two sections of the other angle of this sign, on which a figure is attractively painted to make the space more valuable to the advertiser.

Fig. 95 shows one method of placing advertising signs in position. Mr. Gude, manager of the O. J. Gude Company, declares that wooden signs are fast giving place to steel frames and sheet-iron facings, of which those in the figure are examples.

Fig. 96 illustrates, by comparison, the strong effect produced in black and white advertising boards. The scene behind the bull in the lower sign enlivens the black board, while in the white board the shield is in red. These are, perhaps, the largest examples of permanent advertising spaces held by any two concerns in New York City.

Fig. 97 shows a variety of lettering with very little artistic effort to relieve the plainness and simplicity of the lettering.

Fig. 98 represents a sign board that is rendered attractive by the art work displayed. In every space, with but one exception, the artist's handiwork enhances the value of the advertisement perhaps 50 per cent. This is most noticeable in the market advertisement, as the illustration directly pertains to the meat-supply industry. The observer would, therefore, at first glance, take in the pictorial design and invariably follow out the connection of this with the reading matter of the sign.

Fig. 99 shows two figure designs that are executed in a highly artistic manner. The design on the tire sign is adapted from a production of the Michelangelesque school. The figure and drapery are handled in a manner that places the work in a class far above the ordinary requirements of an advertising fence board. On the advertising sign, the fashion-plate figure is used more extensively than any other design, but in Fig. 99 there is a richness of coloring, a gracefulness of pose, and a careful attention to detail that marks this as far above the figure design usually displayed on advertising signs.

UNITED
CIGAR STORES
One always in Sight
CIGARS
UNITED
CIGAR STORES
One always in sight
F.P.
CORSETS
The Old Reliable
"BULL"
DURHAM
STANDARD OF THE WORLD
THE OLD RELIABLE
"BULL" DURHAM
BEST FOR THREE GENERATIONS

Fig. 96

COLONIAL MUSIC HALL
BROADWAY & 62ND. ST.
BRIGHT CLEAN VARIETIES
MANAGEMENT THOMPSON & DUNDY & TOM W. RYLEY.
ONE ACT MUSICAL COMEDIES
EMPIRE BALLETS
DIRECT FROM LONDON
SMOKING BALCONY
WHITE HORSE CELLAR
LEW FIELDS' THEATRE
Rambler
EASY TO FIND-EASY TO BUY
1350
Hunyadi János
NATURAL LAXATIVE WATER
FOR CONSTIPATION

Fig. 97

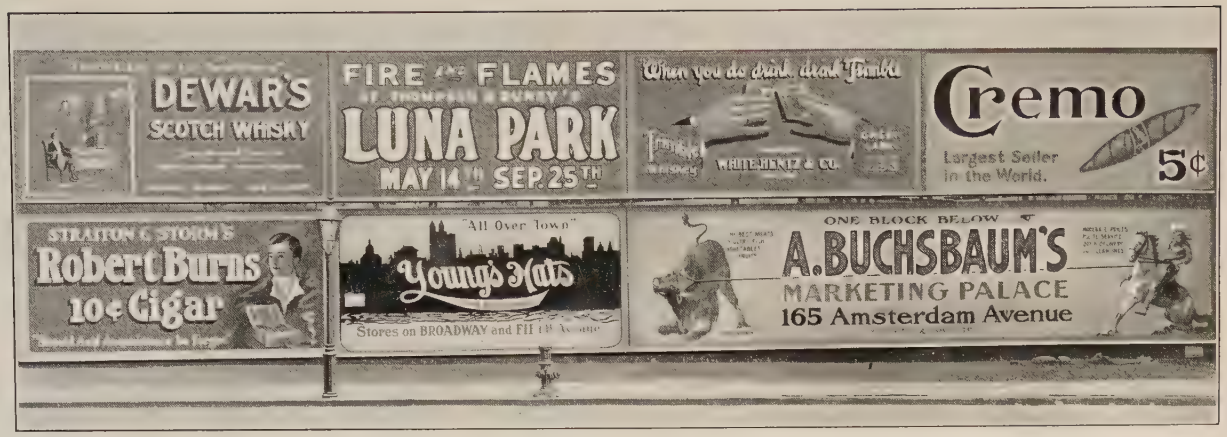

DEWAR'S
SCOTCH WHISKY
FIRE AND FLAMES
LUNA PARK
MAY 14TH SEP. 25TH
When you do drink, drink Trimble
WHITE-HENTZ & CO.
Cremo
Largest Seller in the World.
5¢
STRAITON & STORM'S
Robert Burns
10¢ Cigar
"All Over Town"
Young's Hats
Stores on BROADWAY and FIFTH Avenue
ONE BLOCK BELOW
A. BUCHSBAUM'S
MARKETING PALACE
165 Amsterdam Avenue

FIG. 98

Fig. 99

Fig. 100

Fig. 100 shows a characteristic design of the aggressive and persistent advertiser. "New ideas, original designs," is the watchword in this industry. Any novelty, therefore, that will attract and hold the attention of the public is the means to the end. The dials show the time at various points in the world when it is noon in New York. The design also suggests the conflict between Russia and Japan by a ludicrous collision between the pendulums.

WINDOW SCREENS

65. Architectural Design.—In constructing a window screen for the display of a sign, the usual method is to fit a frame to the window space and cover it with wire; on this letters may be painted, or they may be attached to the wire. Where the shutting out of the light is not a consideration with the merchant, the lower portion of the windows are often lettered and backed up with solid black.

In Fig. 101 is shown an elaborate architectural window screen. The woodwork of this screen is of Flemish oak. The festoons and eagle are finished somewhat lighter than the body of the screen. In the elliptic opening, yellow pebbled glass is set. The letters are gilded and glued on the face of the glass. On the top of the screen at either end, a jardinière is placed containing a small palm. These, however, do not appear in this photograph. The store where these signs were used was a double store with four windows, each containing a similar screen with various inscriptions. Uniformity was maintained in these with regard to height, the style of letter, and the number of lines of lettering in each.

SIDEWALK SIGNS

66. Iron-Frame-Standard Signs.—The ordinary double **sidewalk sign,** with hinged top and spread base, and the single-standard sign with spread feet for base, painted on both sides, are too well known to require illustration in this work. But in this, as with every style of

sign, novelties have been selected with the view to furnishing such examples as may not readily be seen in every thoroughfare.

The sign shown in Fig. 102 is not an excellent example of lettering, but it is to the general design of the sign that special attention is directed. The elliptic body of the sign is of wood. The letters are of gold, and the ground is smalted with a dark-green smalt. The iron standards resemble somewhat the dogs used in a fireplace. The sign is fastened to the standards by means of iron cleats attached to the sign with screws and to the standards with bolts.

RELIEF LETTERS AND CARVED SIGNS

67. Signs With Carved Designs.—The Sydney Lyman sign, Fig. 103, is an excellent example of the artistic raised lettering known as *pyramidal* or *triangular*. The outlines of these letters are perfect in symmetry, and the style of alphabet, French Roman, is most suitable to this form of sign. The sign was painted a rich wine color and glazed with carmine. The letters were of gold, as well as the carved griffin's head and wing. The ticket-office sign below this was lettered in gold and smalted with black smalt.

68. An Innovation.—Fig. 104 shows a novelty in the raised-letter sign in two respects. First, the letters chosen for the sign are from an alphabet that would be the last choice of the sign painter for a raised letter. This style in this particular sign, however, is most applicable. The sign is a black ground with varnish finish. The letters and the wide bevel are gilded. Pearl beading is used on the inner edge of the bevel. Second, the inscription itself is one that is not used by dealers in men's furnishings. The word toggery is the slang form of the Latin word *toga*, a cloak or garment.

69. Samples of Raised Letters.—Fig. 105 (*a*), (*b*), and (*c*) shows a number of letters generally used for signs. The various methods used in treating the face of the letter

Fig. 101

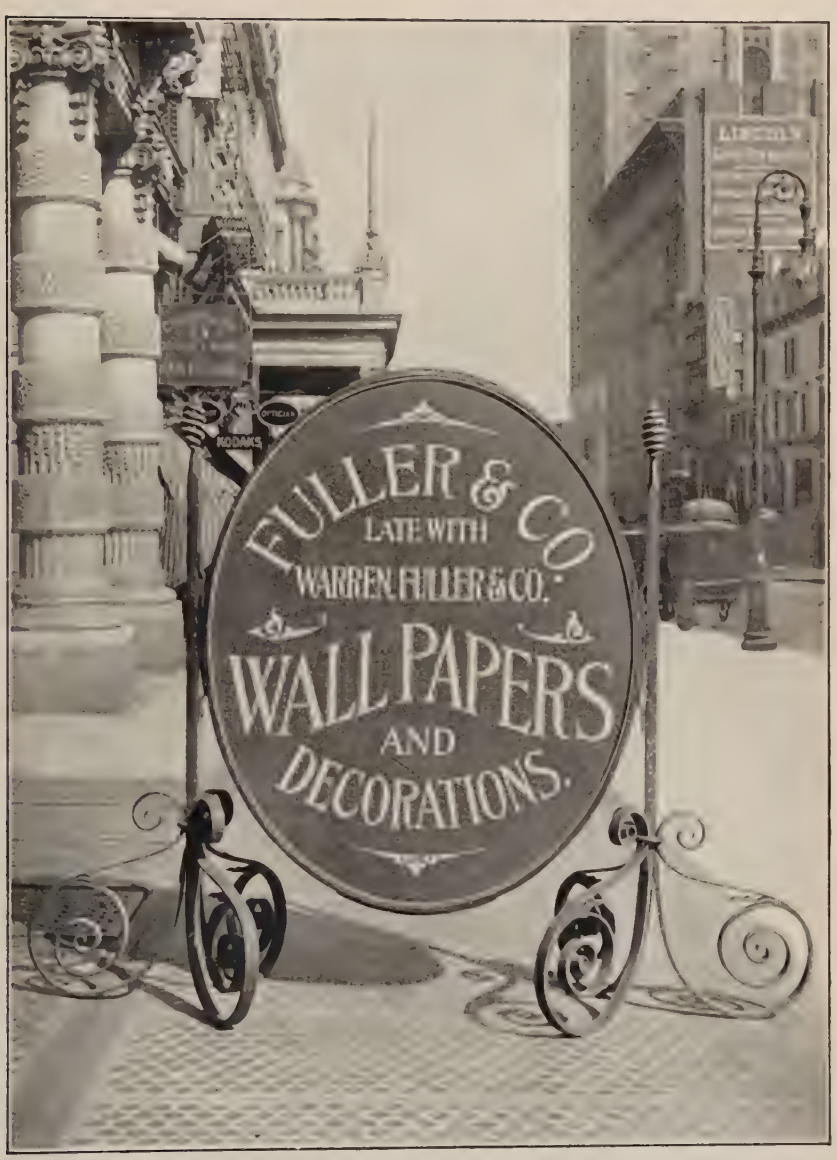

FULLER & CO.
LATE WITH
WARREN, FULLER & CO.
WALL PAPERS
AND
DECORATIONS.
KODAKS

Fig. 102

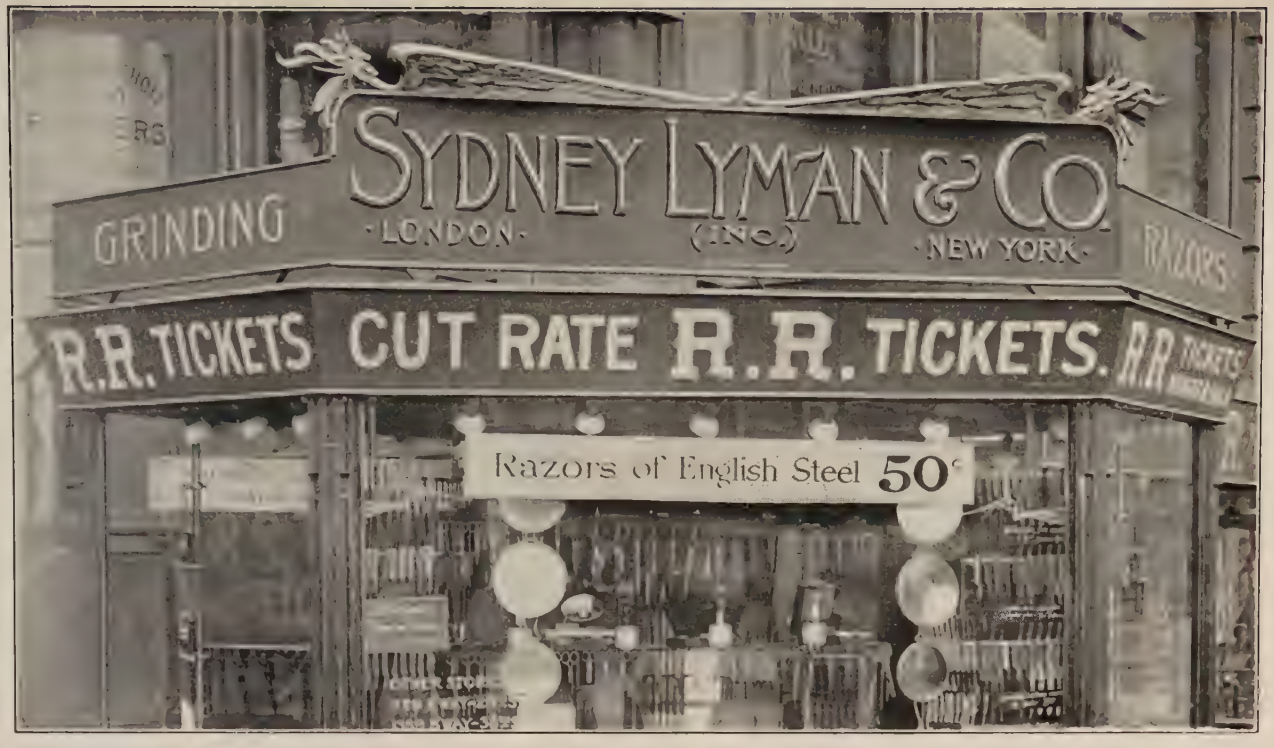

SYDNEY LYMAN & CO.
(INC.)
·LONDON·
·NEW YORK·
GRINDING
RAZORS
R.R. TICKETS
CUT RATE R.R. TICKETS.
Razors of English Steel 50¢

Fig. 103

Fig. 104

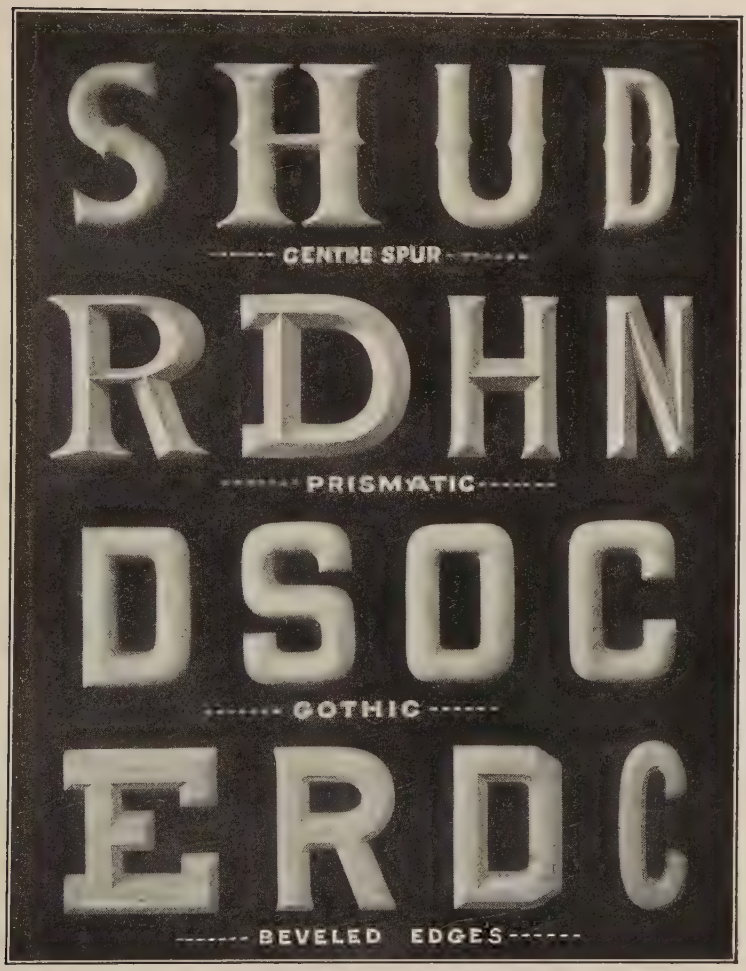

SHUD
CENTRE SPUR
RDHN
PRISMATIC
DSOC
GOTHIC
ERDC
BEVELED EDGES

Fig. 105 (*a*)

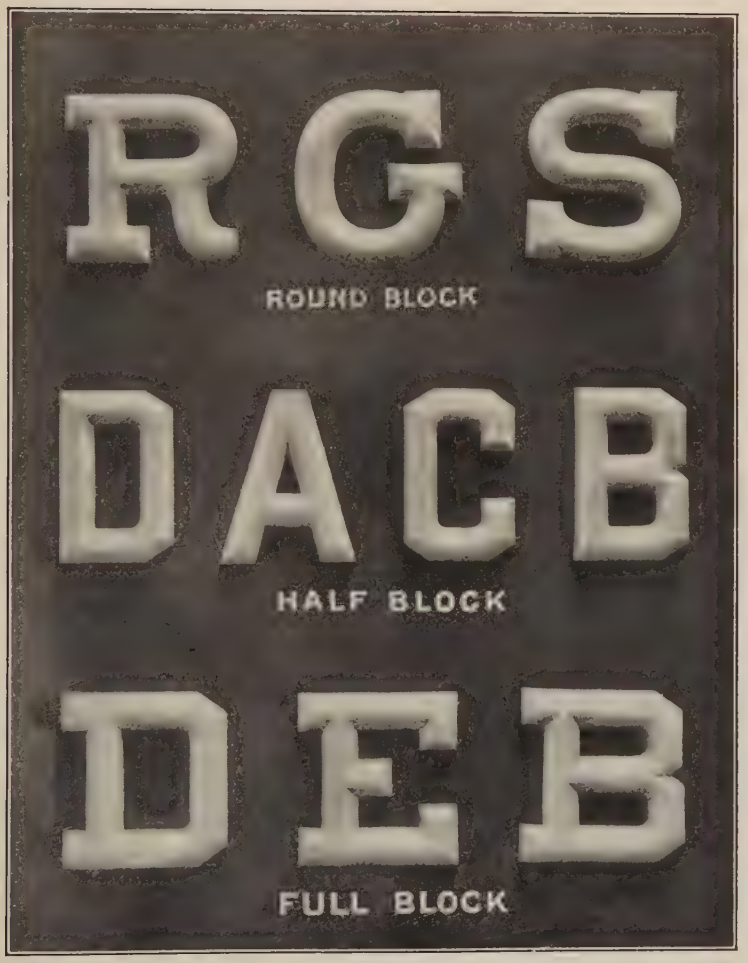


Fig. 105 (*b*)

Fig. 105 (*c*)

Fig. 106

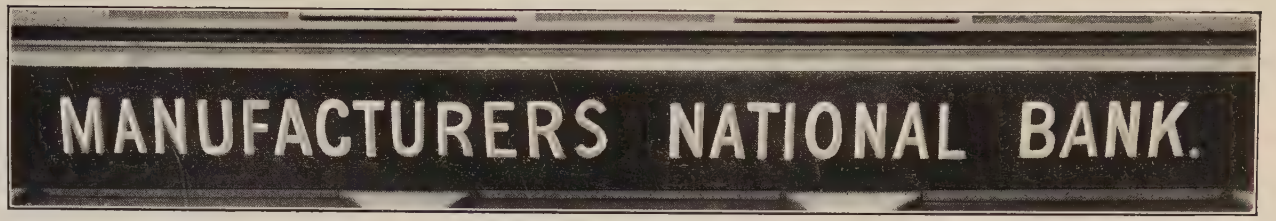


Fig. 107

Fig. 108

are illustrated in (*a*). The first line is the half-round Egyptian with a spur center; the H of this line is Roman. The second line is the triangular or prismatic beveling. The third line is the flat finish rounded to the thickness of the $\frac{7}{8}$-inch pine. The fourth line shows the chamfered edge treatment, the R showing the rounded corners left by the machine, while the E and D have been carried to a sharp bevel in the corners by the chisel. The Round Block, the Half Block, and the Full Block, shown in Fig. 105 (*b*), are all rounded in the same manner. In Fig. 105 (*c*) are shown the plain

Fig. 109

sawed letters that may be either fastened directly on the board or projected as with the H.

Fig. 106 is an example of heavy-stroke Antique Roman prismatic beveling. Surrounding the letters on the sign board is a stripe of silver, the letters being gilded. The panels at either end are silvered, the figures being in gold with a black line surrounding them.

Fig. 107 shows a condensed Egyptian letter, half rounded, a gilded letter on a black-smalted ground; and Fig. 108 shows an inscription in Roman letters. These are gilded and fastened on the fascia of the girder above the windows.

70. Relief Borders.—The design shown in Fig. 109 is an excellent attempt at classical designing. It is evident, however, that the sign maker did not follow out his artistic

Fig. 110

impulse, either in the sign itself, in the iron attachments, or in the lettering. The dragon is carved out of one solid piece and mortised to receive the edge of the board. The dragon, the beveled edge of the board, and the letters also

are gilded. The ground is a rich brown, the letters being shaded terra cotta and black beyond this. One who is skilled can readily recognize the error of the sign painter in making

Fig. 111

his letters too large for the size of the sign, and also the poor judgment shown in his choice of a style of letter.

71. Carved Signs.—In the example shown in Fig. 110, the wood carver has produced a sign from a furnished design

that, aside from painting and gilding, is entirely independent of the handiwork of the sign painter. The center or body of the sign has a dark-blue ground. The cross-lined sections are of aluminum, and the ground of the attached name panel is black. The letters, as well as the carved relief ornaments, are gilded, which makes a rich and attractive sign. This sign is the work of the well-known concern in Newark, New Jersey, whose imprint appears at the bottom of the sign.

72. Raised-Letter Post Sign.—The post sign shown in Fig. 111 is an example of the utility of light iron bracing for light-weight signs. The lines of the sign and of the ironwork are symmetrical. The lettering also, with the exception of the backward incline of the two lower lines, is most appropriate to the outline of the sign. The oak post that bears the sign is extremely small for the size of the sign, but as iron supports at the side extend for some distance down the sides of the post, the resistance to wind pressure is very evenly distributed. The letters and bevels are gilded and the ground is of fine black smalt.

VARIOUS SIGNS AND DESIGNS

73. Onyx Tablet.—An onyx sign is by no means an inexpensive one. Therefore a large onyx tablet with gold-plated letters is quite a novelty. The cost is not less

Fig. 112

than $5 per pound for the best Mexican onyx, and the tablet shown in Fig. 112 is at least $3\frac{1}{2}$ ft. $\times$ $4\frac{1}{2}$ ft., and 1 inch thick. The letters were designed and made by the jeweler, and for this reason are not such as an up-to-date letterer or sign painter would use. They are of gold-plated

cast brass, and are fastened to the tablet with white-lead cement.

74. Portable Signs.—In every large city, the animated sandwich sign, as it is familiarly called, is too well known to require a description. These have given place, in recent years, to the ever-present walking signs that appear above the heads of pedestrians in such cities as New York and Chicago. Fig. 113 shows a snap shot of such a sign.

Fig. 113

75. Illuminated Designs.—Fig. 114 shows the famous subway tavern of New York City, made popular at its opening by a notable prelate of that city. In order to carry the spirit of the ecclesiastical alliance into the sign work and decorations, the owner has chosen the monastic calligraphy and applied these to practical advertising. The building is painted a light yellow, and the designs are brought out in shades of burnt sienna and burnt umber strengthened with black. In the panels for the capital letters, bright blues and greens are used. The lettering is white throughout, except for the capitals, which are in red of several shades. The whole side of the building being covered with this style of work, the effect is most attractive and artistic.

76. Pyrographic Signs.—With the advent of pyrography and of convenient appliances for executing the work, many are using this method for lettering as well as ornamentation. The word comes from two Greek words: *pyr* (fire) and *grapho* (I write), meaning literally "fire writing." Fig. 115 shows an example of pyrography executed by one of our students in the Course of Lettering and Sign Painting. The sign was 22 in. × 28 in. The ornamental portion of the work was highly colored, which is produced with colored stains on the natural wood.

Fig. 114

Fig. 115

Fig. 116

77. Ecclesiastical Lettering.—Lettering on the walls of churches is no small part of the duties of the sign painter. For this work, Church Text or Old English is most appropriate. The example of Ornamental Church Text shown in Fig. 116 is from the famous "Little Church Around the Corner" in New York City. The letters are in gold and colors. The capitals are gilded on a size made of white of eggs and a few drops of glycerine. The colors are distemper colors.

Fig. 117

78. A Plain-Sign Display.—The sign painter is expected to demonstrate his ability by a most elaborate display of sign work on his own place of business. This is not always the case, however, as the sign man unconsciously exhibits his faith in plain signs as productive of greatest results. An example of this is shown in Fig. 117. The signs, although well lettered and well spaced, are severely plain in their general construction.

ENGROSSING

79. Some Excellent Examples.—The importance of engrossing in the lettering profession is shown in the few following examples. Every sign painter or letterer should become proficient in the use of the Soennecken and Auto pens, and be able to write all manner of plain inscriptions in the engrossing alphabets. But to execute such designs as have been shown, one must necessarily follow engrossing as a special branch of lettering. No matter how versatile a letterer may become, his handiwork will show greater proficiency in some particular line of work. In the great variety of examples shown, the attention will be directed to some of the points of artistic merit in each illustration. For many excellent illustrations of engrossing, we are indebted to P. W. Costello.

Fig. 118 shows one of the finest examples of engrossing extant. The price received by the artist for this piece of work was $300. Aside from the excellent ornamental work, the lettering bears evidence of the artist's ability to select the most appropriate styles of letters for every particular part of the work. He has also adhered to the chosen text throughout the work with unerring precision in every detail. The close-spaced parallel lettering of the heading is usually chosen by the engrosser for all prominent words, titles, etc. A testimonial of esteem may permit of the use of colors or gold in illuminating, while expressions of condolence are always in black and gray wash shades. Therefore, in this figure, the capitals and small panels were illuminated with gold, red, and harmonious neutral tints.

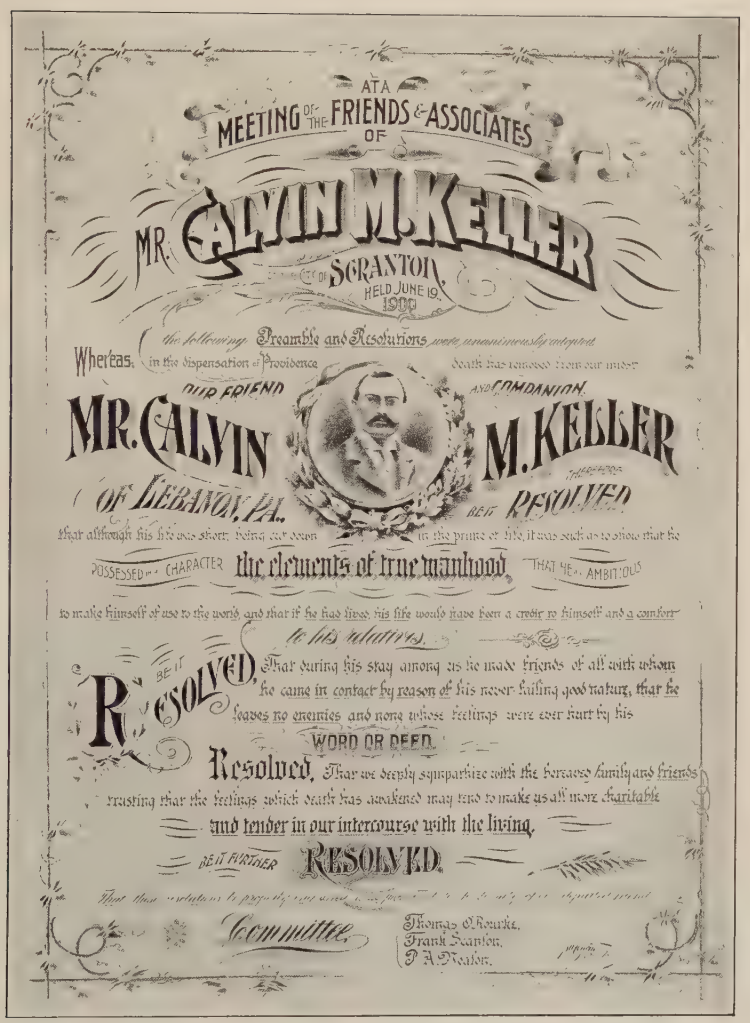
Fig. 119 is another design of the same subject and inscription, for unfortunately for the artist the portrait was not prominent enough to suit the committee having the matter in charge. Herein is shown the versatility of the artist in preparing an entirely different design for the second work. There being no heavy center piece to balance the design, the second production must, in point of artistic merit, give precedence to the first.

Employees of the Bellevue Mine, Coal Department
Lehigh Valley Railroad Co.
Held January 1, 1903.
The Following Preamble and Resolutions were Adopted:
Whereas, we, who have been in the employ of and associated with our late foreman
Appointed Foreman, March 1 1869
John Hale, Esquire,
Honorably Retired Dec 31, 1902
and have labored under his congenial direction and management for the past 33 years,
during which period he acted in the capacity of Foreman of the Bellevue Colliery of the above Company, wish to place upon record our profound regret at the severance of relations which have been mutually pleasant, and also to tender our cordial wishes for the future prosperity of himself and family.
Resolved, That we feel a keen sense of Personal Loss in the severance of
Daily Working Relations
with one who has won our affectionate regards by his unvarying courtesy, generosity and kindly fellow-feeling, and that we hope to be honored for many years to come with the presence among us in a neighborly way of a man so large of heart, so broad of soul, and so worthy to be numbered
Nature's Noblemen.
Resolved, That our earnest wish is for the future of our Retiring Superintendent
Health and Happiness.
Resolved, That a suitably engrossed copy of these resolutions be presented to Mr. Hale as a token of our kind remembrance of his numerous good qualities.
John O'Brien,
William Heath,
M. J. Gilbride,

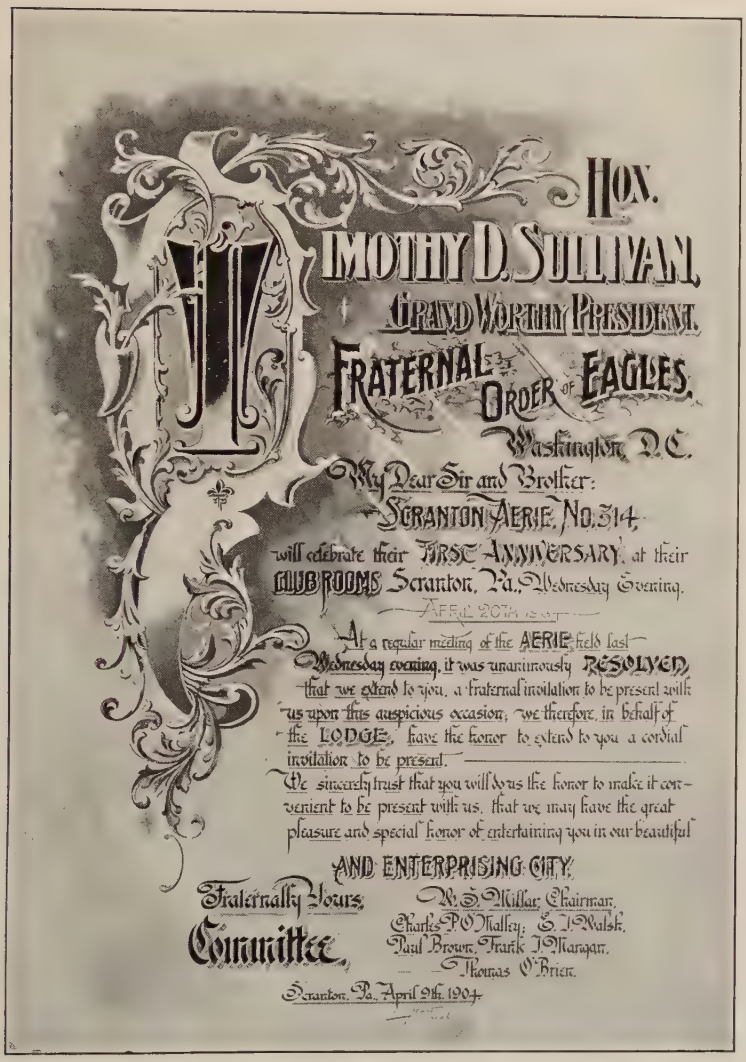
Fig. 118

Scranton, Pa., Jan. 1, 1905.
At a meeting of the
Employes of the
Bellevue Mine
Railroad Co.
Held on this day.
The following Preamble and Resolutions
were unanimously adopted.
Whereas, we, who have been in the employ of and associated with
Appointed Foreman March 1, 1869.
Mr. John Hale,
Retired Dec. 31, 1902.
and have labored under his congenial direction and management for the past thirty three years, during which period he has acted in the capacity of FOREMAN of the BELLEVUE COLLIERY of the above Company, wish to place upon record our profound regret at the severance of relations which have been mutually pleasant, and also to tender our CORDIAL WISHES for the future prosperity of himself and family.
Therefore
Resolved,
That we feel a keen sense of personal loss in the severance of our
Daily Working Relations
with one who has won our affectionate regards by his UNVARYING COURTESY, generosity and kindly fellow feeling, and that we hope to be honored for many years to come with the presence among us in a neighborly way of a man so large of heart, so broad of soul, and so worthy to be
Numbered among
Nature's Noblemen.
Resolved,
That our earnest wish is for
the future of
Superintendent and
Associate,
to be that of
Health and Happiness.
Committee.
Resolved,
That a suitably engrossed copy of these resolutions be presented to Mr. Hale as a token of our kind remembrance of his numerous
Good Qualities.
A Grand Record.

Fig. 119


AT A
MEETING OF THE FRIENDS & ASSOCIATES
OF
MR. CALVIN M. KELLER
OF SCRANTON,
HELD JUNE 19.
1900
the following Preamble and Resolutions were unanimously adopted
Whereas, in the dispensation of Providence death has removed from our midst
OUR FRIEND AND COMPANION
MR. CALVIN M. KELLER
OF LEBANON, PA.
THEREFORE
BE IT RESOLVED
that although his life was short, being cut down in the prime of life, it was such as to show that he
POSSESSED IN A CHARACTER the elements of true manhood, THAT HE WAS AMBITIOUS
to make himself of use to the world, and that if he had lived, his life would have been a credit to himself and a comfort
to his relatives.
BE IT RESOLVED, That during his stay among us he made friends of all with whom
he came in contact by reason of his never-failing good nature, that he
leaves no enemies and none whose feelings were ever hurt by his
WORD OR DEED.
Resolved, That we deeply sympathize with the bereaved family and friends
trusting that the feelings which death has awakened may tend to make us all more charitable
and tender in our intercourse with the living.
BE IT FURTHER RESOLVED.
Committee
Thomas O'Rourke,
Frank Scanlon,
P. A. Noalon.

201 FIG. 120



HON.
TIMOTHY D. SULLIVAN,
GRAND WORTHY PRESIDENT,
FRATERNAL ORDER OF EAGLES,
Washington, D.C.

My Dear Sir and Brother:

SCRANTON AERIE, No. 314,
will celebrate their FIRST ANNIVERSARY, at their
CLUB ROOMS Scranton, Pa., Wednesday Evening,
APRIL 20TH 1904

At a regular meeting of the AERIE held last Wednesday evening, it was unanimously RESOLVED, that we extend to you, a fraternal invitation to be present with us upon this auspicious occasion; we therefore, in behalf of the LODGE, have the honor to extend to you a cordial invitation to be present.

We sincerely trust that you will do us the honor to make it convenient to be present with us, that we may have the great pleasure and special honor of entertaining you in our beautiful

AND ENTERPRISING CITY.

Fraternally Yours,
Committee,

W. S. Millar, Chairman,
Charles P. O'Malley, S. J. Walsh,
Paul Brown, Frank J. Managan,
Thomas O'Brien.

Scranton, Pa., April 9th, 1904.

Fig. 121

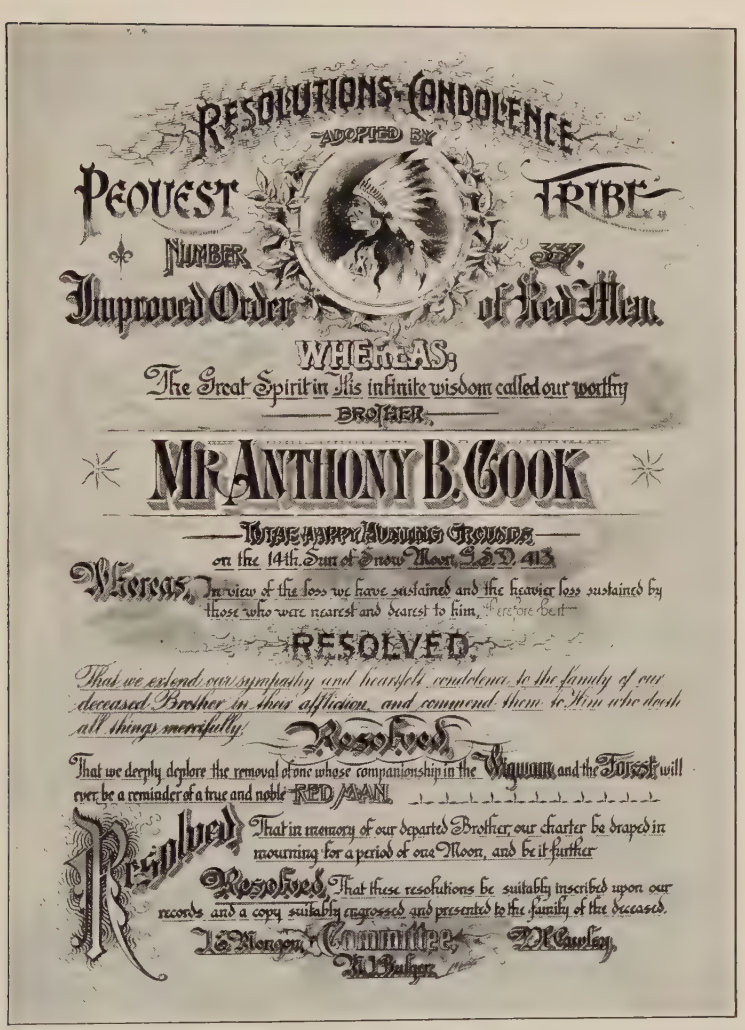

RESOLUTIONS-CONDOLENCE
ADOPTED BY
PEQUEST TRIBE
NUMBER 357
Improved Order of Red Men.
WHEREAS;
The Great Spirit in His infinite wisdom called our worthy
BROTHER
MR ANTHONY B. COOK
TO THE HAPPY HUNTING GROUNDS
on the 14th. Sun of Snow Moon, G.S.D. 413
Whereas, In view of the loss we have sustained and the heavier loss sustained by those who were nearest and dearest to him, therefore be it
RESOLVED,
That we extend our sympathy and heartfelt condolence to the family of our deceased Brother in their affliction, and commend them to Him who doeth all things mercifully.
Resolved,
That we deeply deplore the removal of one whose companionship in the Wigwam and the Forest will ever be a reminder of a true and noble RED MAN.
Resolved, That in memory of our departed Brother, our charter be draped in mourning for a period of one Moon, and be it further
Resolved, That these resolutions be suitably inscribed upon our records and a copy suitably engrossed and presented to the family of the deceased.
J. S. Mongon, Committee, D. H. Cawley,
H. J. Bulger

FIG. 122

At a regular meeting of

Scranton Lodge, Number 123,

B.P.O. ELKS,

held October 6, 1904, the following resolutions on the death of

Brother Theodore M. Miller WERE UNANIMOUSLY ADOPTED:

WHEREAS,

It has pleased the Exalted Ruler of the Universe to remove from our midst our beloved brother,

Mr. THEODORE M. MILLER, AND

Whereas, In his death his family has lost a loving husband and father and the lodge a valued member; therefore, be it

Resolved, That the sympathy and condolence of Scranton Lodge, No. 123, B.P.O. Elks be and is hereby extended to the mourning family in this their hour of affliction,

and be it further RESOLVED, that these resolutions be spread upon our minutes and a suitable copy thereof sent to the family of our late BROTHER.

Committee, P. F. Gunster, P.E.R. John J. Brown, John Benore.

FIG. 123

Fig. 120 is an example of plainer engrossing. In this, however, is embodied a variety of graceful curves that may be seen even in short words. The ornamental border, the symmetrical ornamental lines, and the pen portrait are espe-

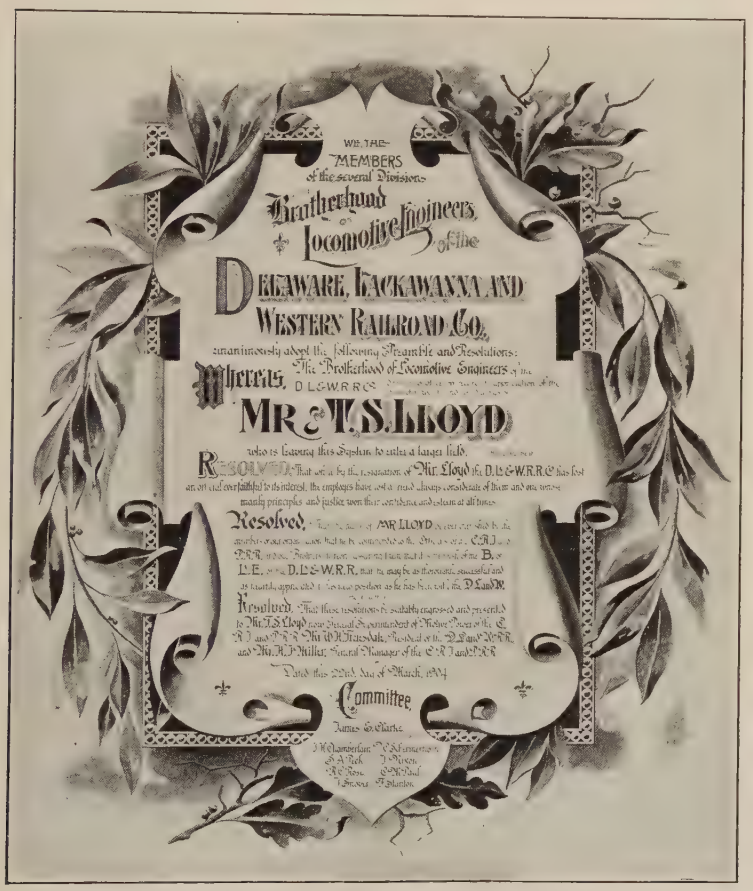


Fig. 124

cially praiseworthy in this design. The portrait is cross-lined or hatched throughout, which requires the closest attention if the likeness is not to be lost.

In Fig. 121 is an example of boldness in design seldom attempted by engrossers, the prominent points of the design

being the artistic treatment of the ornamented heraldic shield and the blending into the background of the strong wash used to bring this out in fullest contrast. Much of the

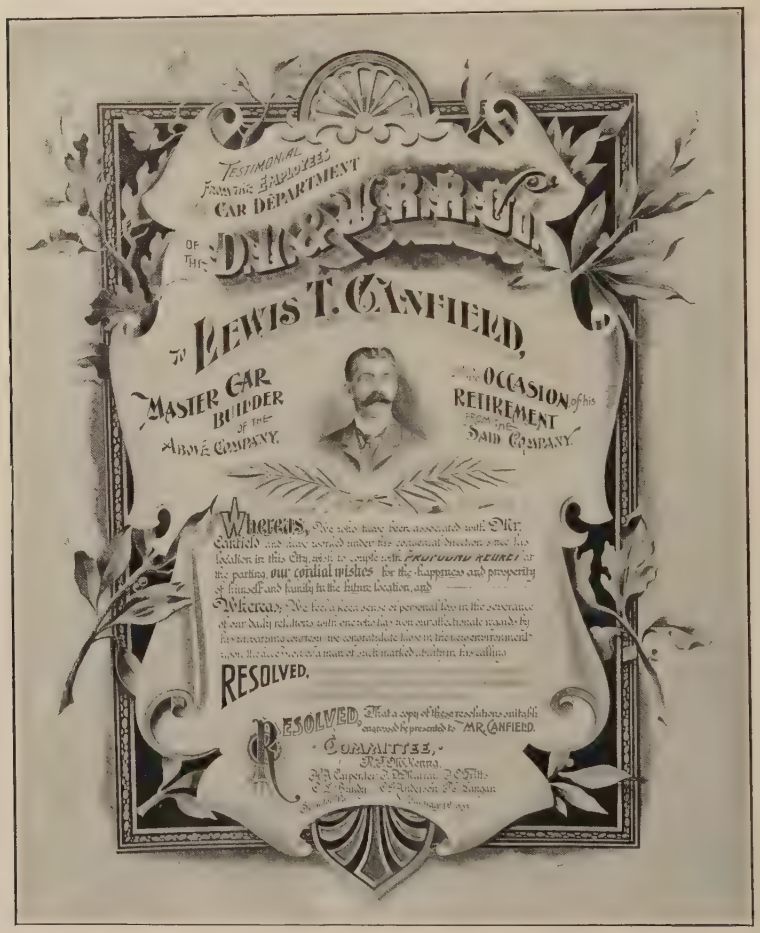


Fig. 125

artistic beauty of this design is in the excellence of the color effect, which is lost in the reproduction by photography.

Figs. 122 and 123 also show strong washes of gray for backgrounds, in bringing out white panels or ribbons. In

A TESTIMONIAL.

THE WELSH PRESBYTERIAN CHURCH OF PROVIDENCE, PA.

TO HENRY G. DAVIES, ESQ.

on his departure from this Church to KINGSTON, PA.

Dear Sir and Loving Brother —

Wherras:

Divine Providence and circumstances combined with your secular occupation necessitate your removal from among us, and inasmuch as you have gained our confidence and love we desire to take advantage of this opportunity to manifest through this certificate, our affections and good will toward you, and also our appreciation of your service and conduct while among us.

Our fellowship as CO-WORKERS FOR CHRIST has been mutual and accordant; therefore, we deeply regret that we must part.

We appreciate most highly THE GOOD SERVICE you have rendered this CHURCH in special capacities, as Secretary and Treasurer of the Church, Chairman of the Board of Trustees and Superintendent of the Sunday School; and above all we value your EXCELLENT CHRISTIAN CHARACTER.

You and your dear family

will be held in loving remembrance in this Church as those who had the welfare of Christ's Kingdom near at heart; and ever willing and ready to do all in their power for its prosperity.

Our prayer shall be with you. The Lord bless you. The Lord make his face to shine on you, and give you peace to the end of life. We are truly yours in bonds of love

In behalf and by order of the Church,

E. R. Roberts, Pastor.

Committee,

Thomas Price,
Benjamin Amos, Daniel Thomas.

Deacons.

David Thomas, Evan L. Morgan,
James M. Thomas, Thomas Price.

FIG. 126

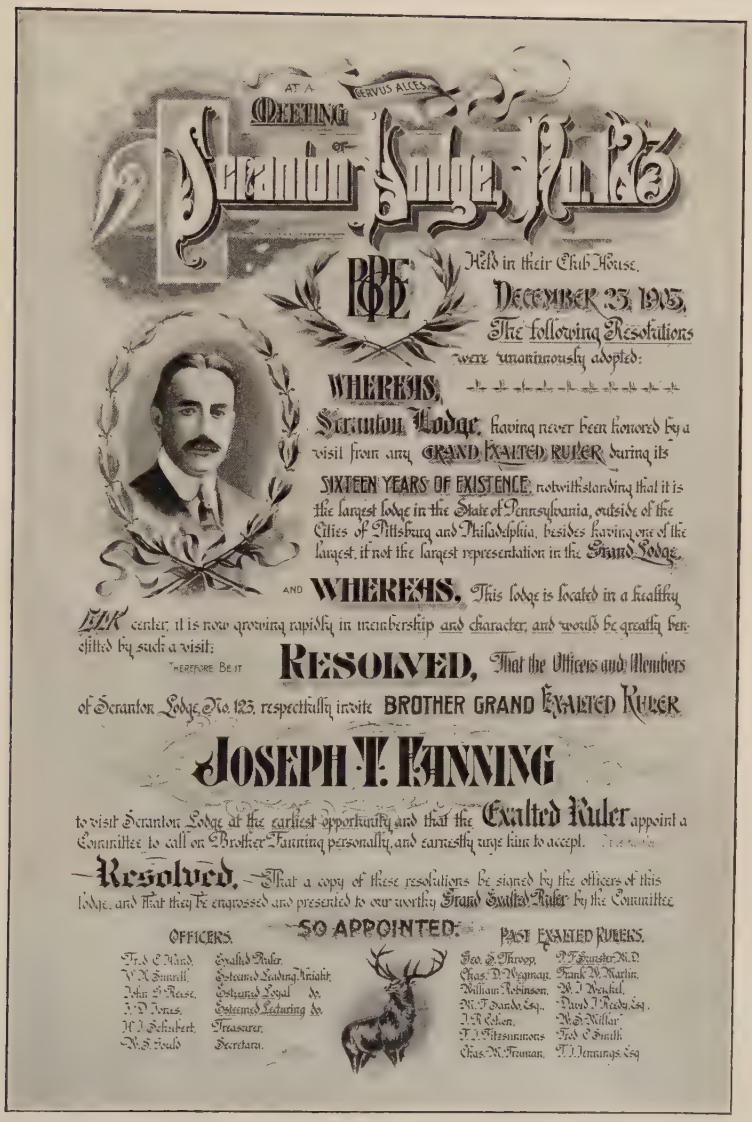

AT A
CERVUS ALCES
MEETING
OF
Scranton Lodge, No. 123
Held in their Club House,
DECEMBER 23, 1905,
The following Resolutions
were unanimously adopted:
WHEREAS,
Scranton Lodge, having never been honored by a
visit from any GRAND EXALTED RULER during its
SIXTEEN YEARS OF EXISTENCE, notwithstanding that it is
the largest lodge in the State of Pennsylvania, outside of the
Cities of Pittsburg and Philadelphia, besides having one of the
largest, if not the largest representation in the Grand Lodge,
AND WHEREAS, This lodge is located in a healthy
ELK center, it is now growing rapidly in membership and character, and would be greatly ben-
efitted by such a visit:
THEREFORE BE IT
RESOLVED, That the Officers and Members
of Scranton Lodge, No. 123, respectfully invite BROTHER GRAND EXALTED RULER
JOSEPH T. FANNING
to visit Scranton Lodge at the earliest opportunity and that the Exalted Ruler appoint a
Committee to call on Brother Fanning personally, and earnestly urge him to accept.
Resolved, That a copy of these resolutions be signed by the officers of this
lodge, and that they be engrossed and presented to our worthy Grand Exalted Ruler by the Committee
SO APPOINTED.
OFFICERS.
Fred C. Hand, Exalted Ruler.
V. A. Sunrell, Esteemed Leading Knight.
John S. Reese, Esteemed Loyal do.
J. D. Jones, Esteemed Lecturing do.
H. J. Schubert, Treasurer.
W. S. Fould, Secretary.
PAST EXALTED RULERS.
Geo. S. Throop, P. F. Gunster, M.D.
Chas. D. Wegman, Frank W. Martin,
William Robinson, W. J. Weichel,
M. F. Sando, Esq., David J. Reedy, Esq.
J. R. Cohen, W. S. Millar
T. J. Fitzsimmons, Fred C. Smith
Chas. M. Truman, T. J. Jennings, Esq.

FIG. 127

At a regular meeting of

Scranton Lodge Number 123,

B.P.O.ELKS,

held in their rooms, Thursday, December 1st, 1904, the following preamble and Resolutions on the death of

BROTHER Matthew H. Dale WERE UNANIMOUSLY ADOPTED:

WHEREAS, It has pleased the Grand Exalted Ruler of the Universe to remove from our midst,

OUR BELOVED BROTHER

MATTHEW H. DALE, AND

Whereas, In his death his family has lost a loving father and brother; and the Lodge a valued member, be it therefore

Resolved, That the sympathy and condolence of Scranton Lodge, No. 123, be and is hereby extended to the mourning family in this their hour of affliction, and be it further

RESOLVED,

That these resolutions be spread upon our minutes and a suitable copy thereof sent to the FAMILY OF OUR LATE BROTHER.

Committee

P. F. Gunster, P.E.R.,
John Benore,
John P. Quinnan.

FIG. 128

At a meeting of the

BOARD OF DIRECTORS

OF

THE PENNSYLVANIA CENTRAL BREWING CO.

OF THE CITY OF SCRANTON,

held on the 9th. day of September 1904.

The following Preamble and Resolutions were unanimously adopted:

WHEREAS,

We have heard of the death of our ESTEEMED ASSOCIATE

EDMUND J. ROBINSON,

a Director of this Company whose death occurred June 12th. 1904, and Whereas, the relations existing between the deceased and the members of our Board of Directors, render it proper that we should give expression of the pain which we feel in parting from him.

THEREFORE, BE IT

RESOLVED,

That in the death of Edmund J. Robinson the Penna. Central Brewing Comp'y has lost an esteemed and valued Director, and that we tender our most heartfelt sympathy to his bereaved mother and family, and that in token of our respect, this resolution shall be spread at large upon our minutes, and an engrossed copy thereof presented to his afflicted family.

President. Secretary.

FIG. 129

the latter specimen is seen an excellent example of a well-balanced design. Much depends on good judgment in arranging the inscription so as to provide for general balance in the design, as well as to balance the matter evenly or either side of the center line.

In Figs. 124 and 125, the elaborate border is shown. Fig. 124 illustrates a sacrifice of letter embellishment, in order that the entire design may be consistent; the value of the ornamental border is thereby enhanced. As seen in Fig. 125, the upper portion of this design causes confusion in the lines, and requires the concentration of the eye on this part of the design for an instant to separate the ornamental border from the ornamented letters. While the work in both is excellent, yet the latter could be omitted with advantage to the general effect of the design. In both designs, the artist has used oak leaves and bay or laurel leaves, which are treated with grace and freedom in the drawing and execution.

In Fig. 126 is a testimonial containing a great amount of matter. In this, however, the artist has shown his ability to separate the inscription and break up the solidity of the design by giving prominence to important words and phrases. The result is that the whole is easily read, and although plain in appearance, the work is a good example of close pen work in every detail.

While all engrossed designs are improved by being balanced on either side of a center line, it is sometimes impossible to do this, and the weight of the work may be carried to one side, as shown in Fig. 127. In this, the greatest strength of the design is within a triangle in the upper left-hand corner. In such cases, where the inscription would permit, the design is improved if the portion in the lower right-hand corner could be given prominence equal in strength to one-third that of the heading.

Fig. 128 shows a well-balanced center design, wherein an exception is made in the body of the inscription and the weight of the ornamentation is thrown to the left side. This feature is always allowable in engrossed designs, as

ornamental panels and illuminated capitals do not permit of any work that would counterbalance their strength.

Fig. 129 shows a bold treatment of plain lettering, and, were the heading of a little larger type, and the lines of letters carried with a larger ogee farther to the right at the

Indolence is Misery.

None so little enjoy life, and are such burdens to themselves as those who have nothing to do.

"A want of occupation is not rest-
A mind quite vacant is a mind distress'd."

(a)

The Injustice of Man to Man.

When once you have uttered the words of slander, it is no longer in your power to stop their progress. Many a noble nature has been ruined through the thoughtless, or evil speech of a neighbor. "Behold, what a great fire a little spark kindleth." The grief and misery that follow in the wake of the destruction of personal property by fire cannot compare with the injury to ones character through slander.

(b)

Fig. 130

top and to the left at the bottom, the design, which is well executed, would be better balanced in the middle and lower parts. These suggestions are given not in the spirit of criticism, as the work under consideration is of the highest order, but to draw attention to various features in designing

of every description where improvement could be made. There are very few artists who are unable to detect every imperfection in their own work, and the student is advised to critically revise every piece of work he executes and note the points wherein the work could be improved were it to be done a second time. This is the only sure way to progress in any line of art work.

FIG. 131

80. Plain Pen Work.—Much of the lettering in engrossed designs is done with Soennecken pens, and some with the brush or ruling pen. For diplomas, map titles, and all work wherein the ornamental has no place, the lettering may be done with the pen exclusively. An example of plain engrossing is shown in Fig. 130 (*a*), done with three sizes of Soennecken pens. The letters in this example are vertical; Fig. 130 (*b*) shows another example of the same text, slightly inclined to the left.

Fig. 131 is a reproduction from a photograph of a show-card 22 in. × 28 in. made by one of our students. The work on this card, with the exception of the two top lines, was done with various sizes of Auto pens. When one has become familiar with the pens and the alphabets most suitable to their use, many kinds of work can be done with greater rapidity and with cleaner effect than by using a brush.

ORNAMENT

SIGN- AND CARRIAGE-PAINTERS' ORNAMENT

81. Origin of Ornament.—It is doubtless true that **ornament** in some form dates as far back in the world's history as the use of pigments. Egypt furnishes examples of the most ancient styles of ornament, so pure and classical in style that they are employed by modern ornamenters. The earliest forms of ornament were flat, and not until about the close of the Middle Ages did this art reach its highest development. Just prior to the invention of printing, the calligraphists had, by centuries of competitive study and practice, become most adept in ornamental engrossing and in illuminating initials.

From a study of natural forms, the monks and nuns (for it was exclusively among the monastic orders that this work was practiced) soon developed the relief ornament from the acanthus leaf; although, in a crude form, this was employed in Greek architecture. It is true, in ornament as in all else in nature, "There is nothing new under the sun." The cycas palm branch, so commonly seen in modern ornament as a symbol of victory, merit, or preeminence, is closely allied in outline to the Egyptian papyrus; and the art nouveau of the present day, so much affected by the latter-day ornamenter, has been especially adopted, modified, and extended in numberless ways from the graceful outlines of the Egyptian lotus plant. From the acanthus-leaf form have been developed the most graceful scroll ornaments. Such

natural forms as those of the grape vine, with its leaves, clusters, and tendrils, the oak leaf and acorn, the pine cone, the bay or laurel wreath and the olive branch, or of almost any familiar leaf or vine, may be conventionalized or copied direct, for the purposes of ornament. Of animal forms, those of the lion, griffin, dragon, horse, dog, and deer are often used for ornament. Representations of the eagle, the owl, and the falcon are frequently found. Of fish forms, the one kind that is used in ornament to a great extent is that of the dolphin.

NOTE.—The student who wishes to undertake an exhaustive study of ornament and its history, classification, etc., would do well to study Owen Jones's "Grammar of Ornament." For a ready-reference book of applied ornament, Meyer's "Handbook of Ornament" is recommended. For all general requirements of the sign painter, or letterer, however, enough is given in this Course.

82. Value of Ornament.—The importance of the study of ornament as applied in lettering and sign painting is almost equal to that of letter formation. Up to a certain point, embellishment is compatible with design and adds to the appearance of the work. Carried beyond a certain point, it is detrimental and introduces inconsistency in the design, and betrays lack of judgment on the part of the letterer. One who is really proficient in designing will never overload his design with ornament nor place it where it does not properly belong. The work of the novice, however, is usually characterized by a too generous use of the ornate, both in his letters and in every available interstice in the design. It should, therefore, be the aim of the beginner to use ornament sparingly, and to study to apply it artistically.

The first principle to be observed in ornament is symmetry. Graceful curves in every outline throughout the work, with perhaps one or two exceptions, will not accomplish the desired end. The defects will be more noticeable, and the eye of the skilled workman will at once be attracted to irregular curves or to an unbalanced effect in the completed work. The value of ornament, therefore, lies not only in a proper use of the most suitable forms, but in a skilful application of these in every detail of the work.

RELIEF ORNAMENT

83. Natural Leaf.—The acanthus plant, from which modern relief ornamentation took its origin, has long graceful leaves that fall away in symmetrical curves from the stem. The leaf is divided into groups of points, which the

Fig. 132

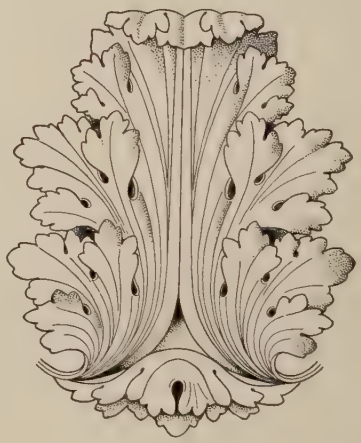


Fig. 133

Greeks followed quite closely in their application of this leaf to ornament. The Romans idealized their treatment of the acanthus by rounding the points and curling the ends of the leaves into artistic forms. Fig. 132 shows the natural leaf

Fig. 134

of the acanthus, and Fig. 133 shows a plain treatment of the leaf common during the Louis XVI period. The student can see how this leaf has become the basis of modern relief ornament, with all its diversified forms and applications.

FIG. 135

84. Characteristic Features of Modern Relief Ornament. There are many forms used in relief ornament that bear no resemblance to the acanthus leaf. Several of these have been given in Fig. 134. The scroll ornament worked out in relief shows an exaggerated treatment of the leaf, as the points of the leaves are purposely extended and made to curl. A study of the various parts of this figure will assist the student in adding variety to his ornament.

85. Gilded and Painted Scrolls.—To apply a gold scroll, a paper pattern should first be made and the scroll drawn carefully and shaded with a lead pencil or brush. The outline of the scroll is then pricked, and the design pounced on the surface with whiting (if the surface is dark) or with powdered charcoal if the surface is of a light color. The entire

design is then sized and gilded. When thoroughly dry, the ornament is shaded with asphaltum of several shades, beginning with a light transparent shade and flowing the lighest shades over the entire portion of the ornament that is subsequently to be given stronger shades. The high lights of cream color or white have a tendency to bring out the ornament in strongest relief. Bright red and blue may be added to the gilded scroll with the effect of greatly improving the ornament, if artistically applied.

Fig. 135 shows a scroll the center of which may be colored. Above the band crossing the center, red may be run in, and blue below the band. The entire centerpiece is then shaded with natural shades to give a convex appearance to the whole.

Painted scrolls are pounced on the surface in the manner just described, and the general color of the scroll laid on. When dry, the shading may be done, or the strong shades may be applied in the first painting, thus blending them while both colors are wet. Variegated colors are sometimes used. For example, a scroll may begin to the left with shades of yellow running into green in the middle of the scroll, and finishing at the right end with purple or reddish shades. The high lights on the different colors should be tints of the colors on which they are placed.

86. Some Excellent Examples.—There is, perhaps, no better ornamenter known to the craft today than Arthur McLean, of Rochester, New York, to whom we are indebted for several excellent examples of relief and flat ornament. Mr. McLean's ornaments in relief betray the hand of a master, both in composition and harmonious color rendering.

Fig. 136, as does the preceding figure, shows a centerpiece design with a bright-colored center. In the original, the leaves of the ornament are a subdued purple, and the center figure of the ornament is gray. The coloring at the back of this is blended, from carmine at the top to light yellow at the bottom. The ground on which this ornament is painted is maroon.

Fig. 137 shows an ornament designed to fill out the end of a panel on an omnibus or carryall. The color of the ornament

Fig. 139

Fig. 136

Fig. 137

is green, tempered with gray, the high light being a tint of the same color. The ground on which the ornament is painted is light yellow, and the shade from this is a natural shade for the yellow. A second shade, black subdued with Indian red, is often added where greater strength is required. The dark shade is placed close to the ornament and the natural shade beyond it. When shading a gilded scroll, the student can readily see where the shades should be placed by carefully studying these illustrations.

A scroll must be so designed in all cases as to conform in a general way to the part of the vehicle, machinery, or sign on which it is placed. Fig. 138 shows a scroll designed for the frame of a stationary engine, one end of which is boat shaped. In relief scrolls on machinery, the ornamenter often uses gold bronze instead of gold leaf. The bronze for this purpose is mixed with a vehicle that gives brilliancy to the bronze, and then applied as paint. The shading and high lighting is placed on the bronze in the same manner as on gold leaf. By this method, an ornament may be completed in a few moments, while in using gold leaf delay is often occasioned by the necessity of waiting for the size to dry. The character of the work is such that the manufacturer of machinery is not willing to pay the extra expense for gold-leaf ornaments; hence the use of bronze as a substitute. A great advantage, also, in the use of bronze (an advantage that is not overlooked by the ornamenter) lies in the fact that machinery is usually painted by an unskilled painter and that the ground color is often quite tacky.

Another style of ornament, shown in Fig. 139, is designed to fill out the corner of a circular top to a sign board or other similar space. This is also painted on a yellow ground, the ornament shading from a subdued green to deep red in the strongly shaded parts.

In the ornament shown in Fig. 140 is an excellent example of blending several colors in the various parts of the work, so as to give an artistic color effect. The ground on which the ornament is painted is cobalt blue with a shade of black. The ornament is full of color, embodying several shades of

yellow, green, and red. The student will find it of practical value, when designing a relief ornament, to study carefully the symmetrical curves shown in this example.

Fig. 141 is a corner relief ornament especially adapted to the corner of a square or rectangular panel. This is painted in yellow on a blue ground.

87. Rococo Relief Ornament.—A most practical form of relief ornament is the rococo. This is especially useful in borders for signs and for panels in an inscription design. The ornament may be elongated to a considerable extent, or it may be condensed. Thus it can be adjusted to any shape and made to fill many requirements of the ornamenter.

Fig. 142

In the illustration used, Fig. 142, a photograph is reproduced of one of S. A. Millington's glass electric signs. The center panel, containing the name of the hotel, is on glass, and set in against the rope border surrounding it. The frame is of wood and the rococo ornament is carved in wood and glued to the face of the sign. The ground of the frame is black smalt, that of the glass is drop black. The letters are outlined in gold and made translucent with sugar of lead. The rope border as well as the rococo relief ornament is gilded, completing a rich and ornamental sign.

Fig. 140

Fig. 138

Fig. 141

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FLAT ORNAMENT

88. Simplicity in Flat Ornament.—To relieve a plain design, the letterer often places a stripe around the work, and to further add to the neatness of the whole he introduces some simple ornament in each corner. Perhaps the simplest

Fig. 143

forms that may be used are those shown in Fig. 143. The character of this ornament is such that lines and brush marks may be added until the ornament loses its simplicity and and becomes a studied ornament, such as shown in Fig. 144.

Fig. 144

The simplest form of centerpiece and tailpiece ornament is shown in Fig. 145 (*a*) and (*b*), the former being often used where the top line of letters is placed on a curve

and the second line is straight. The tailpiece, Fig. 145 (*b*), is used at the end of an inscription, where the design requires an ornament to fill the space and give it balance.

(*a*)

(*b*)

Fig. 145

Fig. 146

A more elaborate tailpiece is shown in Fig. 146. This form of tailpiece may be laid in with color in the center field.

Fig. 147

89. Panel Ornaments. The flat ornament is subject to diversified treatment and coloring, and may be made as elaborate as the relief scroll. In Fig. 147 is shown an example of an ornament generally used on the panels of wagons, machinery signs, etc. In designing an ornament of this character, it is necessary to draw carefully but one-fourth of the design. Half of the other end may then be traced on tracing cloth or paper and reproduced on the surface of drawing paper by retracing over carbon paper. In the same manner, the remainder of the design may be reproduced. Thus, a design may be quickly made and be absolutely accurate in every detail.

Such ornaments are usually gilded or bronzed, and opaque colors are used for filling in the spaces, such as light vermilion, cobalt blue, green, etc. Where a broad strip surrounds the panel, this is often crossed at the center of the ornament and becomes a part of it, as shown in Fig. 148.

90. Panel Ends.—There are endless combinations of lines and curves that may be

Fig. 148

Fig. 149

Fig. 150

applied to flat ornament; and at the end of a panel a design may be used and arranged so as to conform to the irregular

Fig. 151

Fig. 152

shape given to the broad striping. If this be plain, an ornament may be used without reference to the outside broad stripe. If, as is often the case, the border stripe is woven

into the design of the ornament, as in Figs. 149 and 150, the end of the panel may be treated as the ornamenter sees fit.

91. Corner Pieces.—Figs. 151 to 157 show various designs of corner ornaments in which the double or single

Fig. 153

Fig. 154

stripe is ingeniously worked in to form a part of the ornament. Figs. 158 to 160 show ornaments that may be used independently of the broad stripe or fine line.

The student will notice that in all these corner ornaments the 45° angle is equally divided by a line drawn from the corner of the angle, and that one half of the ornament corresponds exactly with the other half.

Fig. 155

Fig. 156

92. Mosaic Ornament.—A corner piece is shown in Fig. 161 that is used when the letters are formed in the same style. The face of letters may be colored within lines of another color; the design imitating regular Mosaic work.

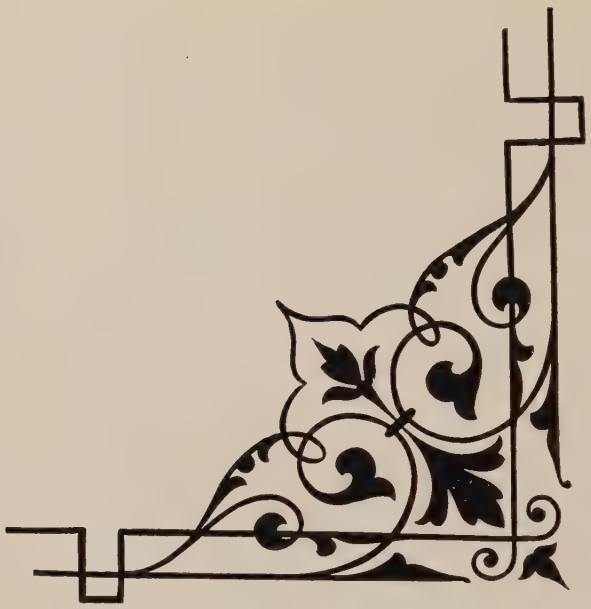

Fig. 157

Fig. 158

A chisel-shaped brush is used for this ornament, with which it can be made quite rapidly. If colors are used, a tint of one of them may be used as a field and this is extended

Fig. 159

Fig. 160

beyond the ornament. Such designs must consist of scrolls, as the ornamenter, for obvious reasons, is unable to use any but an arbitrary style of ornament.

93. Wagon Ornaments.—An ellipse containing a sheep's or steer's head is often used on market wagons. Fig. 162 shows not only the elliptic center, but also the style of ornamentation that may be used to embellish the design. A light-line ornament does not add to the weight of the centerpiece, and is better, therefore, than a heavy flat orna-

Fig. 161

ment. The relief scroll, likewise, may be used, but this should not be heavier in effect than that of the illustration. In this example are shown the styles of letters most suitable to such an inscription and the manner in which they may be shaded. If the letters are in gold leaf instead of in black, they should be shaded close to their outlines. The ornament may be outlined or shaded, the former being preferred.

Fig. 162

A SERIES OF QUESTIONS

Relating to the Subjects Treated of in This Volume.

It will be noticed that the questions contained in the following pages are divided into sections corresponding to the sections of the text of the preceding pages, so that each section has a headline that is the same as the headline of the section to which the questions refer. No attempt should be made to answer any of the questions until the corresponding part of the text has been carefully studied.

SIGN AND BANNER MAKING

EXAMINATION QUESTIONS

(1) How would you prepare a scroll-sawed sign top?

(2) Outline the process of preparing and hanging a wire sign to be read from opposite directions.

(3) Where the outlines of letters are to be carved, what tool should be used?

(4) What modeling material should be used when making a relief design for a catalog cover?

(5) What silver is used in the process of mirror silvering?

(6) How is a design etched on gold leaf?

(7) Describe briefly the method used to produce a damask effect.

(8) For what purpose is liquid slating applied in sign painting?

(9) How are colors mixed for hand-painted posters?

(10) How many paintings are necessary in painting a portrait for sign purposes?

(11) How may cotton cloth be tacked to a frame without causing it to wrinkle?

(12) (*a*) Where are wire window screens used? (*b*) How may the meshes of fine wire be filled to produce a solid-face letter?

(13) What material is generally used for large commercial banners?

(14) What material is used in sheet-iron signs to make the letters translucent at night?

(15) Do you understand the method of swinging a stage?

(16) (*a*) How may an old smalted sign be relettered with a white letter and blue-smalt ground, so that it will be finished in 24 hours? (*b*) How may a sheet of zinc be lettered in gold on a black varnished ground, so that it will be completed in 24 hours?

(17) How may porcelain letters be removed from glass without injuring them?

(18) For a plain brass sign, containing 8 square feet and four lines of letters, what price should be given a customer?

(19) For a japanned-tin sign with three lines of letters in gold, what charge should be made?

(20) Describe briefly the process of preparing a portrait on a political transparency.

(21) How may a design on a space 8 ft. × 5 ft. be enlarged from a design 8 in. × 5 in.?

(22) For a foundation for gold lettering on silk or satin, what paint should be used?

(23) For marking a design on glass, what pencil should be used?

(24) How are ribbons and panels fastened on the netting in large political banners?

(25) How are large wooden letters, used on roof signs, fastened together?

PRACTICAL DESIGN AND ORNAMENT

EXAMINATION QUESTIONS

(1) Explain briefly the construction of the monogram flash sign.

(2) What material is used on the inside of sheet-iron signs to make the letters appear white in the daytime and give a diffused light at night?

(3) How is a sheet-iron sign, such as shown in Fig. 42, trimmed with ornament?

(4) How are cast-bronze plates, as shown in Fig. 36, attached to marble or granite in cemetery work?

(5) Describe the method of beveling brass plates.

(6) How are the letters attached to the plate in Fig. 9?

(7) How is the ornamental top and bottom design produced on a metal plate, as shown in Fig. 11?

(8) What quality of bronze is used for cast-bronze signs?

(9) How should cast-brass script letters be treated that are to be placed on a plate-glass window?

(10) Design a corner piece in relief ornament.

(11) How is the relief-letter sign illuminated, shown in Fig. 53?

(12) Design a centerpiece in flat ornament.

(13) How would you prepare an oak sign, so as to give a natural-wood finish, such as shown in Fig. 58?

(14) Design a corner piece in flat ornament.

(15) How is the lion's head painted on a window design, as shown in Fig. 65?

(16) What method is used to shade the gilded eagle, shown in Fig. 66?

(17) What natural form in plant life gave rise to relief ornament?

(18) What country furnishes most ancient examples of ornament?

(19) To what classical style does the designing belong shown in Fig. 114?

(20) What can you say of the utility of a window screen such as is shown in Fig. 101?

(21) To shade the gilded owl shown in Fig. 67, what method would you pursue?

(22) What is the advantage of backing a wire sign with wood, an example of which is given in Fig. 73.

(23) Design a Mosaic corner piece.

(24) In preparing designs for cast-bronze tablets, what style of letters would you consider most appropriate?

(25) In placing a brass plate on a wide-beveled board, how is the plate attached to the board, and the sign firmly placed on a brick surface?

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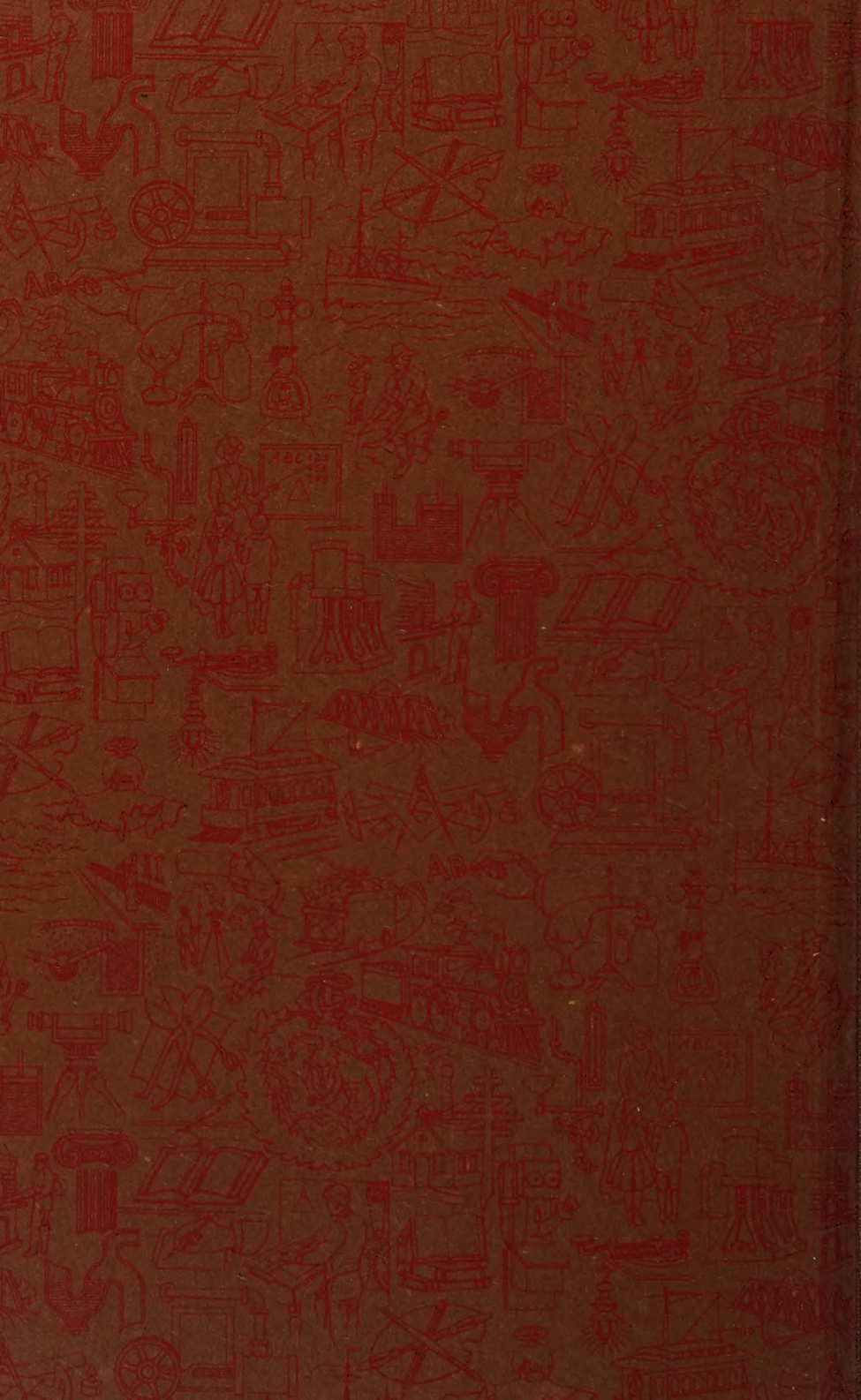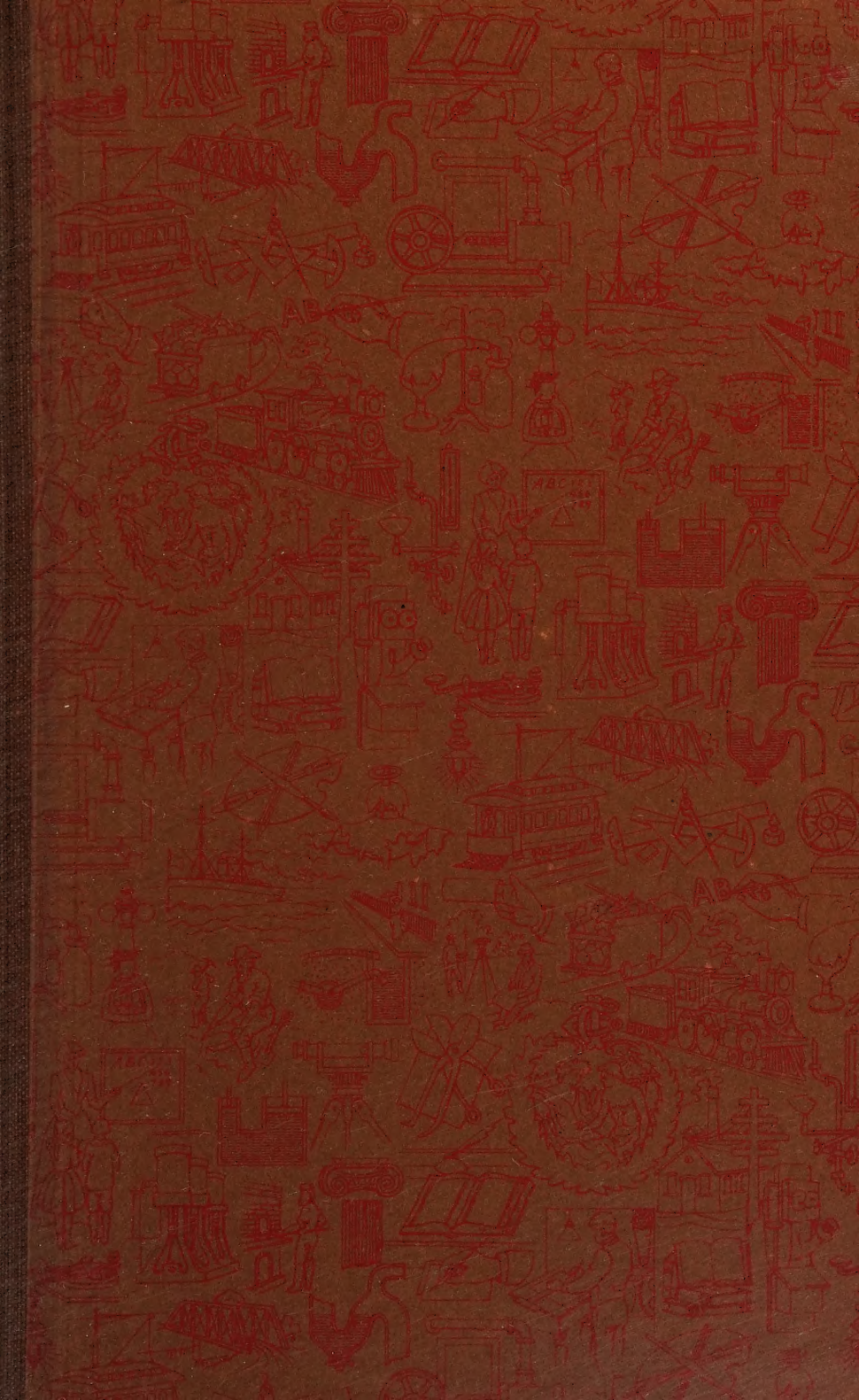
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